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THE BRITISH PTERIDOLOGICAL SOCIETY

NEWSLETTER

No. 5 - 10

DECEMBER, 1967 - 1972

MISSOURI BOTANICAL

APR 1 - 1968

GARDEN LIBRARY

Secretary

**J. W. DYCE, 46 SEDLEY RISE,
LOUGHTON, ESSEX.**

MISSOURI BOTANICAL
GARDEN LIBRARY

There is no doubt that ferns are rapidly coming back into favour once again. Not only is the botanist busy with them, constantly finding out new facts, new extensions of their range and new hybrids, but the naturalist is developing the seeing eye for ferns in the field, and the grower is finding that they can add much interest to the garden and the greenhouse. All this redounds to the benefit of the Society and our membership is increasing accordingly.

At one time the ferns seemed such a simple subject for study, with all the species neatly docketed, but now we find that this is far from being the true picture. There is not just one Common Polypody growing in this country - there are three of them, and as for the Dryopteris we amateur botanists hardly dare look at them nowadays ! We used to talk glibly of the "Spinulosa Complex" - interesting, but seemingly just a simple blend of the two species Dryopteris spinulosa (now called D. carthusiana) and D. dilatata, which we were able to comprehend, but now it is discovered that the whole Dryopteris genus is a complex - very very much a complex, as we discovered this year when, during one of our field meetings, we visited our member, Mr H V Corley, who is working on the subject. Our heads were reeling long before he had finished explaining the involved parentage of some of his many plants, and the possible permutations. The advance in botanical knowledge will help the field worker interested in ferns in the wild, for now he can get the answer to many of the morphological problems which have worried him in the past. It helps us too, for instead of groping for an answer which we hope will be convincing, when fronds from wild plants not in accordance with the book description are sent to us for naming, we can now more confidently ascribe them to hybridity.

But a word of comfort to our gardening members - do not let all this worry you unduly. You can still continue to call the polypody Polypodium vulgare, and the male ferns Dryopteris filix-mas, D. borreri, D. dilatata, D. spinulosa, and the rest. Perhaps one day we shall be able to persuade our botanist friends to take some more practical interest in the variations of the British ferns and answer some of the many questions we ask - what causes variation - why is it seemingly more common in some parts of the country than in others - why does it seemingly appear to have become so much more rare in the wild - etcetera, etcetera ? This will be research which our growers will not regard as "botanical stuff", it will interest them intensely, and it might even inspire some of them to blossom forth into print, to the great benefit of our Gazette, and the relief of the great mental stress under which our Editors labour at present !

There is a very real feeling among our horticulturalists of not belonging. So many are unable to come to meetings, and the Gazette is their chief contact with the Society. Our Editors are very much aware of their feelings and are seriously worried. The problem was discussed fully at a Committee Meeting held earlier this month, and as a result we hope to include more articles in future Gazettes to cater for the non-botanists.

PUBLICATIONS

The British Fern Gazette is of course our principal publication, the only other regular one being this Newsletter. As already mentioned, we realise the Gazette is not giving all the members what they want, and while we are anxious that it shall fulfil the needs of all sections of the Society, it must be pointed out that there are only two large fern societies in the world, the American Fern Society and ourselves. The former caters for the great American Continent, while we are rapidly assuming a similar role in the Eastern Hemisphere, catering not only for Britain but for Europe and much further afield. A high standard of publication is therefore essential, for our Gazette is already receiving favourable recognition as an international scientific journal. With more funds at our disposal we hope to do more than publish only the Gazette, and it is considered we can do much to meet the needs of our non-botanical membership with the provision of various handbooks. Some which we have in mind are a pocket book for the field giving descriptions, illustrations and the distribution of the various British ferns, a handbook on variation in British ferns, and a guide-book to the fern areas of Britain, listing their ferns, and where to be found, together with other information such as suitable places to stay. Conservationists need not be worried - we do not intend to lead the collector to the rarest ferns. These are a few of the ideas we are discussing, and at the AGM it was proposed that we open a Publications Fund, to which interested members may make donations towards the cost of publishing these handbooks. Since the AGM £22 has already been received for the Fund, and members reading this may feel they would like to help. Contributions should be sent to the Secretary.

Perhaps it will be appropriate to mention here that we are very hopeful of being able to get the first five volumes of the Gazette reprinted soon at a cost we can afford. These early volumes which are mostly the work of C T Druery and Dr F W Stansfield, two of our greatest experts on fern variation, contain much invaluable information on the subject, and we draw your attention here to the fact that they will be available to members but, we regret, will have to be rather expensive.

Many university libraries and other institutions already possess incomplete sets, and we invite others which subscribe for the Gazette to consider having these early volumes on their shelves. Private members, unable to afford the cost, can approach their public libraries and endeavour to interest them in purchasing complete sets.

THE ANNUAL GENERAL MEETING

This was held during the Annual Excursion, which this year was at Kettlewell in Yorkshire. Dr James Davidson was elected to the Presidency for his second term of Office, and the only changes were brought about by the change in our Constitution whereby the two members of the Committee with the longest service are not eligible for re-election until after the lapse of one year. Under this new rule Mr F Jackson and Mr N Robinson were not re-elected, and we take this opportunity to put on record the debt we owe to them for their valuable services over a period of many years, with the hope that we shall still be able to enjoy their active support although out of office. The two vacancies on the Committee have been filled by Miss H D M Norman and Mr H J Bruty, both of them active members who will be most useful additions to our governing body.

A new Auditor has also been appointed, Mr H J Bacon, a retired civil servant who takes over the post from Mr P Temple, who as a member of the Committee could not continue in this office. We thank Mr Temple for his past services and welcome Mr Bacon to his new duties.

Another distinguished name has been added to our list of Honorary Members, that of Professor Dr T Reichstein who was professor of organic chemistry at the University of Basel in Switzerland, and whose work has been recognised by the award of a Nobel Prize. He is an experienced plantsman and has done much work on the European fern flora, particularly among the hybrids. Professor Reichstein's association with us confers great honour on the Society.

The Secretary was able to present a very favourable Report to the Meeting, with a steadily increasing membership now standing at over 280, a Meetings Programme well supported, and a greatly improved financial position. The Royal Society again supported us by a Grant-in-Aid of £75, and we express our grateful thanks to this august body for their faith in us which has carried us through a critical time when we were setting a high standard without sufficient funds to do so, but confident that this policy would pay dividends in the future.

These dividends have now begun to come in, and with careful and wise government we can continue to forge ahead, a state of affairs which we feel will do more than anything else to express our thanks in a practical way to the Royal Society.

Appended is a copy of our Financial Statement. The figures on the left are from last year's Statement for comparative purposes. Three amounts stand out, the large increase in the subscriptions, the improved income from the sale of old Gazettes which has helped us to swell the Special Account considerably, and the decrease in the cost of the Gazette. The first, of course, is due to the increase in the membership and the subscription rate, and the third to the fact that we have changed our printers to a firm which has been able to produce for us with no falling off of standard, a larger Gazette at a smaller cost. For the information of our many newer members, the Special Account has been built up from the sale of old Gazettes and fern books, for the purpose of meeting the cost of reprinting the early issues which are in demand but unfortunately out of print.

While on the subject of finance, may we remind all members who have not yet paid their subscriptions, that these were due on 1 July last, and should be sent without delay to the Treasurer.

MEETINGS

Our Meetings Programme for 1967 is now completed, and members have shown more interest and supported the meetings well. The indoor meetings were very successful. At the Spring one Dr J D Lovis of Leeds University lectured to us on the European Asplenium hybrids. He has done much research work on these, and his comprehensive talk gave us much extremely interesting information on this subject which is actively occupying the time of our botanists these days. The team at Leeds University is under the very able leadership of Professor Irene Manton, whom we are privileged to include among our Vice-Presidents, and on the list of our Honorary Members. The Autumn indoor meeting was a very different one, a conversazione held on the evening of 4 November after an afternoon visit to the Chelsea Physic Garden, where Mr W G Mackenzie, the Curator, welcomed us and conducted us round this historic garden and its library containing many priceless old books. A cup of tea with delicious home-baked cakes provided by Mrs Mackenzie was greatly appreciated by the party.

During the evening a buffet supper with coffee, tea and wine was available, prepared by Miss Norman and Mr Cartwright, and members were enabled to meet and talk. An exhibit of books and papers was laid out, also one of plants and fronds of fern varieties about which the Secretary talked for a short time.

Day meetings included a visit to Kew Gardens fern houses, when Mr Bruty showed us round and Professor Holttum gave us interesting information about some of the ferns, many of which were collected by him in the Far East and sent home to Kew. Another visit was to the Oxford Botanic Gardens to see the ferns there, and this was combined with a visit to Mrs S G Gurney at Boars Hill near Oxford, to see her most delightful garden containing many fine ferns. This day was finished with a visit to Mr H V Corley at Pucketty Farm near Faringdon, to see his very comprehensive collection of the Dryopteris hybrids, after which an enjoyable meal was provided by our host.

The weekend meeting was held in Ashdown Forest, and we were very fortunate in finding an ideal centre at The Hook Farm near West Hoathly. The farmhouse is a delightful old building and Mrs Buckley catered well for our every comfort. For anyone visiting this part of the country we can fully recommend The Hook Farm. Unfortunately, it rained hard during most of this weekend, but we were able to see enough to realise that we were in the centre of an area which will give much good hunting and we are planning to return again next year. Some of Britain's more rare ferns are to be found, including Dryopteris aemula and Hymenophyllum tunbrigense. We hope there will be a good attendance of members during our next visit, and we recommend this weekend meeting to beginners who will be able to get a good introduction to many of Britain's ferns.

The Annual Excursion will be fully reported in the next issue of the Gazette, so all we shall say here is that it was well attended, and was held in an excellent centre in the North of England, surrounded by country containing not only a wealth of ferns but also many of our rarest alpines.

Our northern members arranged one weekend meeting which unfortunately was attended by only two members, Mr Robinson our Northern Meetings Secretary, and Mr Kaye. They spent a delightful weekend at Santon Bridge in Cumberland, finding many ferns including several varieties. May we make a plea for more members to attend these meetings in the north. There is magnificent fern country there, and led by Messrs Robinson and Kaye who know the whole area well, we can promise members a very rewarding time.

FERN SHOWS

This year again we put up a Fern Display at the RHS Fortnighly Show on the 27/28 June. The ferns were provided by only a very few people, and we would like to see more members in the south giving us practical assistance by bringing plants along. This Display which we hope to repeat annually, can be a most useful shop-window for the Society, and has already brought in many new members.

A show of another kind is the Southport Flower Show, one of the few in the country which encourages the showing of ferns with the provision of a large number of fern classes. The Society works closely with the Show Committee to keep the classes up to date, and a large Silver Perpetual Challenge Trophy has been presented by the Society for award each year to the best large display of ferns. A tent is provided for the specialist societies to advertise themselves and we have a stand there, supervised by Messrs Robinson and Hayhurst. This year the Secretary who has now retired from business, was able to join them, and we had a busy time answering the many enquiries received about ferns. Another useful function of the Stand is the opportunity given to members visiting the Show, to come along and make themselves known. An important duty of the Secretary is to get to know personally as many members as possible and he was delighted to meet several at Southport this year. We extend an invitation to all members who can come to Southport Flower Show, to make a point of coming to the Societies' Tent and enjoy a chat with us. The fern classes too, provide a splendid opportunity to see some of the finest fern varieties in cultivation today, and a visit to them is recommended to all beginners who are feeling their way and wish to learn more about fern varieties.

PROGRAMME FOR 1968

Having reported on the meetings in this year's programme we now go on to present our 1968 Programme, a copy of which is appended, and we hope that many more members will take advantage of these meetings to join in the active life of the Society. Attendances comprise a goodly mixture of botanists, fern lovers, variety hunters and growers, and last but not least, beginners. We emphasise the last-named because we find that some new members are most hesitant about coming to our meetings, because they know so little about ferns - and this is just the reason why we want them to come, and welcome them warmly.

We exist to help them, presumably they joined to learn more about ferns, and we assure them that they will not feel lost at our meetings and all the help they need will be willingly given. They will find that even our botanists - and we are proud to include many eminent ones in our company - are human and approachable (!!!) and very pleased to help the veriest beginner. We ask all members therefore to study the Programme and come to as many meetings as possible.

PLEASE NOTE that it is intended to hold a meeting of three or four days or up to a week on the Isle of Arran on the week preceding the Annual Excursion which is being held at Dalmally in Argyllshire. The Arran Meeting is for members interested in botanising on this fern-rich island, and anyone interested should advise the Meetings Secretary straightaway, as the programme will be tailored around those attending.

FERN HOLIDAYS

One of the handbooks we plan to produce will give information about the good fern areas in Britain and suitable places for centres when visiting them, but some of our members may like some brief notes on the subject which may be of help when planning holidays and outings.

The best fern areas are in the south west of England - the "West Country" we call it - Snowdonia in North Wales, the Lake District, and most of Scotland, particularly in the west and centre. In the heyday of the fern cult, the West Country and the Lake District appeared to be the most productive of varieties. The former, the epicentre of Polystichum setiferum, produced practically all the fine varieties of this fern or their progenitors, while the latter seemed to be the chief centre for the Athyrium and Dryopteris variations. Hunting in these areas is still productive of good results, and good centres at which to stay in the west are the Axminster district and the Brendon Hills and Quantock Hills. There are many good hotels and village inns, and we have always found the AA Handbook a useful guide in selecting places to stay. In the Lakes, the Windermere, Coniston, and Borrowdale areas have provided the Society with successful excursions in the past and again there is a good choice of suitable centres.

In addition to being good fern country, Snowdonia can provide a much greater range of species than anywhere else - the Society recorded 36 species during a visit some years ago, about 10 better than our next best regional record. Portmadoc, Beddgelert, Capel Curig, Betws-y-coed and Llanrwst are some of the many good places from which to explore the area.

In Scotland we find wilder country, less populated, and so the centres are fewer and further apart. Inveraray, Dalmally, and Port Appin in the west, and Killin, Aberfeldy and Dunkeld further inland are all recommended as central for good hunting grounds, as well as the Loch Alsh and Loch Carron regions further to the north west.

These are only a few suggestions made from personal experience, and of course there are many many others far too numerous to mention here. Ferns are common plants throughout most of Britain, with the exception of East Anglia, the driest part of England and consequently not good fern country.

THE CONSERVATION CODE

Fern holidays lead on to the subject of conservation which is appearing more and more in writings concerning natural history these days, and there is a growing awareness of its importance in the world today. A Conservation Code has been compiled by the Field Studies Facilities Committee, and although only issued provisionally at present and open for amendment, its headings are worthy of note here as a reminder to those of us who work in the field :

Plan and lead excursions well
Choose and use your area carefully
Respect ownership
Think of other users of the countryside
Leave the area as you found it
Avoid disturbance to plants and animals
Collect no more than you need
Safeguard rare species
Record your observations
Give no one cause to regret your visit

PHOTOGRAPHING FERNS - By P R Chapman, ARPS

The Society is always interested in receiving donations of fern slides from members, whilst a record of one's own plants and discoveries greatly adds to the interest of the hobby. Many members of course are experienced in the production of excellent fern photographs, but there are probably others who would like to do so, but do not know quite how to start. Possibly their photography has been limited to holiday shots, or, if they have attempted ferns, the results may have left much to be desired.

An expensive camera is not essential for photographing ferns, although naturally with more comprehensive equipment the job becomes rather easier. However the owner of a simple camera need not be deterred, as with a few precautions and some care, he can turn out photographs almost, if not quite as good as can be obtained with much more costly apparatus.

Fern photography is essentially close-up photography, and one of the common faults of plant photographs in general is too small an image in the frame, in which case the shot loses impact, and relevant details of the specimen are not easily seen.

There are so many types of camera that, in a short article, it is impossible to describe the use of each for fern photography, but in general they can be divided into reflex cameras and the rest. Single lens reflex cameras are the easiest to use for our purpose since they normally focus to around 18 ins without any attachment; this is close enough for many specimens, and for extra close-up work, such as details of fronds and sori, extension rings can be fitted readily, whilst the reflex viewfinder shows just what will be included in the photograph. On the other hand, rangefinder cameras and those where focusing is carried out by means of a scale set to the required distance, normally only focus to about 3 ft and to go closer a supplementary lens is needed. These are available in three powers of 1, 2 and 3 diopters. Usually only the 2 and 3 are necessary. When purchased, the lens will have with it a table showing at what distance it will focus with each setting of the camera lens. Holders for these lenses can be obtained for most makes of camera, or a simple card holder can be made up to push on to the lens mount. When photographing a fern, it is necessary to have the camera, with its supplementary lens at the correct measured distance from the specimen, and the lens centred on the part to be photographed.

A tripod makes this adjustment easier. The viewfinder cannot be used as it will not function correctly at a close distance. Supplementary lenses will enable the photographer to approach to within 10 ins of the subject.

The owner of a twin lens reflex will need a pair of supplementary lenses, one for the taking and one for the viewing lens, and these are available, parallex compensated; that is to say, the viewing lens is automatically adjusted for the closer focusing. These are very effective, but rather more expensive than the single lenses.

Another fault in plant photography is often a distracting background. This may be difficult to avoid in the field, but can be minimised by holding back surrounding vegetation or sometimes getting a companion to hold a cloth or card behind the specimen. Potted ferns in a collection can easily be stood in front of a suitable neutral background.

When photographing ferns by natural daylight, it is often difficult to avoid hard shadows cast by some frond on those beneath. A white reflector, such as a newspaper or handkerchief can often be used to throw some light into these shadows. When using flash, an extension lead will enable the flash gun to be held further back than the camera, which will probably be too close for the flash. Blue flash bulbs are needed for daylight type colour film; electronic flash is suitable for this as well as for black and white photography.

Although most members will want to produce colour slides only, black and white photographs of ferns and their varied shapes can be extremely rewarding, especially when turned into large-sized prints. Whether in colour or monochrome, the photography of ferns can not only stimulate and help us in the pursuit of our hobby, spreading its fascination to others, but could lead to a second hobby of plant photography.

SLIDE LIBRARY

The Society is building up a Slide Library, and members are invited to send slides, either in colour or black and white, to Mr R F Cartwright, 143 Pittmansfield, Harlow, Essex, accompanied by some relevant information about them.

C T DRUERY'S WRITINGS

C T Druery, our first Editor, wrote on ferns for many papers and periodicals, and it is interesting to browse through the eight large volumes of his press cuttings which are in our possession. We reproduce the following article which contains some useful information for those who want to get the best results from their plants -

FERN CULTURE by C T Druery. From "The Garden" 2 February 1901

In the culture of ferns, as with all other plants, the nearer we approach the conditions under which they grow wild and luxuriantly the greater will be our success and the fewer our disappointments. Ferns are survivors from a period when the earth was doubtless warmer, cloudier, and damper than now. Consequently, it is in woods, shady lanes and secluded glens that we find our ferns at their best. Thus, the first thing is to avoid an excess of sunshine. The next thing is to avoid wind, not merely on account of the drying nature of some winds, but far more because the friction set up between the fronds is bound to seriously damage them, especially when we are dealing with some of our finest cut varieties. Thirdly, drought must be avoided at the roots, and the more humid the air the finer the development. On the other hand, the more light we can give the better, since light is with ferns, as with all vegetation, absolutely necessary; and as regards drought, drainage must be attended to, as a stagnant soil means disease and death to the ferns implanted therein. These are the fundamental principles of success, and now to other considerations.

First and foremost, we strongly advocate single crown culture as far as possible, that is, keeping a fern to one centre of growth, and not permitting it to form a crowd by means of its offsets. The shuttlecock section of ferns, or those which send up their fronds in a circle round a central core, are very apt to develop young plants from the bases of the fronds outside the circle, and these if left alone speedily assume adult size, and in so doing jostle their parents, mix up their fronds together, battle for existence underground with their roots, and as a result, all the individuals to a certain extent, are dwarfed, while the consequent crowding of the fronds detracts from their beauty and grace. A single crown kept so by persistent removal of such youngsters will have fronds double the size, and with their varietal characters doubly enhanced, so that a magnificent symmetrical circle of heavily-tasselled four feet fronds replaces an unsightly two feet clump of greatly inferior character.

With many ferns this eliminating process eventually results in a non-production of further offsets, but in others the central crown itself splits gradually into two, and in this case it is necessary to wait until they get quite independent, when they can be divided with the aid of a knife and gentle pressure. Ferns with creeping roots, such as the polypodies, are obviously not open to such treatment, but the simple fact that they travel prevents the struggle for existence at the roots, and all that is needful is to plant them in pans instead of pots, and so facilitate their rambles and help their development.

SPORE AND PLANT EXCHANGE

Members wishing to exchange spores and plants will find the Newsletter a useful medium for the purpose, and all offers and requests will be printed in the issue following their receipt. Subsequent correspondence must be between the interested parties direct and not routed through the Secretary.

The American Fern Society Spore Exchange requires spores of all kinds, and their list of those available can be obtained from the organiser, Mr Neill D Hall, 1225 NE 95th Street, Seattle 15, Washington, USA.

The University of Hull Botanic Garden issues a list of seeds and spores offered for exchange, obtainable from the Assistant Curator, Botanic Garden, Department of Botany, The University, Hull, Yorks.

The following overseas members are interested in the exchange of spores -

Mrs E S Bayley, Danbury Park, Postbox 21 MR, Marlborough, Salisbury, Rhodesia

Mr G Kunkel, Camino Viejo 9, Tapira Alta, Las Palmas de Gran Canaria, Canary Islands

Mrs Sylvia Leatherman, of the Los Angeles International Fern Society, 2637 North Lee Avenue, South el Monte, California 91733, USA

Mrs G E Tierney, 593 Buchanan Street, Hillside, New Jersey 07205, USA

It has been suggested that the Society might organise "Bring and Buy Sales" of ferns for the benefit of our funds. The method is for members to present spare plants for the sales, and to come and purchase others they may require. If a sufficient number of members are interested, we shall consider arranging such sales, so please let the Secretary know.

READING CIRCLE

For the information of our newer members, we have a Reading Circle which circulates the American Fern Journal among those interested. This is issued quarterly and contains much valuable information for those seriously interested in ferns. Please advise the Secretary who will add your name to the list.

THE COUNCIL FOR THE PRESERVATION OF RURAL ENGLAND

The Council strives to prevent unnecessary damage to the countryside, but it is not opposed to development of the right kind. It actively promotes closer liaison between all users and lovers of the countryside through its constituent bodies and branches. It is recognised and consulted by Government Departments, local and statutory authorities, does work of vital importance, but receives no Government grant, and is supported only by voluntary contributions.

The first national appeal for funds has been launched with the theme "Guard the Countryside", to help the Council to expand its activities and carry out its functions more fully. The Appeal deserves the support of all naturalists, and contributions should be sent to - Guard the Countryside, C P R E, 4 Hobart Place, London S W 1

WICKEN FEN APPEAL

Wicken Fen is a National Trust fenland reserve containing a great variety of plant and animal life, which was formerly abundant in the surrounding countryside before the drainage of the fens began in the 17th century. Wicken Fen is potentially one of the major wetland reserves of Great Britain and indeed of Western Europe. Development plans to enable it to fulfil its purpose are estimated to cost £75,000, of which £30,000 has already been contributed. Interested members are asked to support the work and send their contributions to the Hon Treasurer, National Trust Wicken Fen Appeal, 1 Brookside, Cambridge.

THE GARDENERS CHRONICLE - BACK ISSUES

We are advised by the Gardeners Chronicle that a fair number of back copies are available at a reduced price of 1/- per copy. Members who want to take advantage of this offer should address their requests to -
G C Subscriptions Manager, 9 Harrow Road, London W 2.

THE COMMONS REGISTRATION ACT (1965)

This Act lays down that all common land not registered as common by January 1970 shall cease to be common. Until 30 June 1968, this can be done free by anyone, but after that date there will be a registration fee of £5. Registration began in January of this year and up to the end of October less than a quarter of the common land of England and Wales has been registered. Has your common been registered yet ? Do not assume that someone else has done or will be doing it, and make certain by doing it yourself. Particulars can be obtained from your County Council.

PAIGNTON ZOOLOGICAL AND BOTANICAL GARDENS

We are informed by the Managing Director that they have in the Gardens a collection of exotic ferns, left to them by the late Herbert Whitley of Primley, Paignton. We have been asked to invite members to call and see the Collection if they are ever in this part of the country.

OBITUARIES

It is with regret that we announce the death of the following members -

E J Greig of Royston, V I, B C, Canada, who was a member for only a few months before his death in November 1966

A H Hewitt of Wolverhampton, Staffs, who died this year

Stewart Mitchell of Dundee, who died in May of this year

E St Clair-Morford of Nice-Cimiez, France, who died in January of this year

WANTED

Back issues of the British Fern Gazette and old fern books

Members with old Gazettes or fern books for which they have no further use, are invited to present them or sell them to the Society. There is always a demand for old fern books from new members, and if you are considering disposing of yours please give us the opportunity to acquire them.

Data and Specimens Wanted

Clive Jermy is studying the biology and distribution of *Pilularia* and *Azolla* in the British Isles. Any records, notes or specimens (especially of sporing material, preferably fresh in plastic bag) will be gratefully received. Material to be sent to him at the British Museum (Natural History), Cromwell Road, London S W 7, and postage can be refunded if requested.

NEW FERN BOOK

Members will be interested to know that a new book, "Hardy Ferns", dealing with both British and foreign plants, is being published this coming Spring by Fabers. The author is Reginald Kaye, a Vice-President and a Past President of the Society, and the foremost fern nurseryman in the country today. He is well qualified to write on the subject, and his book describing the ferns and their cultivation in a very comprehensive way, will rank as one of the best and most useful works for the collector and grower.

We wish Mr Kaye every success with his book.

NEW MEMBERS AND SUBSCRIBERS

ALLEN Edw G and Son Ltd 10/14 Grape Street, Shaftesbury Avenue, London W C 2
ANSTEY Miss Janice M Northbank, Rowhill Road, Hextable, Swanley, Kent
ANTIQUARIAAT JUNK (Dr R Schierenberg) Postbox 5, Lochem, Holland
BANTON F C 134 Oak Tree Lane, Birmingham 29
BENTON Mrs E 33 Piko Crescent, Riccarton 4, Christchurch, New Zealand
BOBROV AE Botanical Institute of the Academy of Sciences of the USSR, Prof Popov Street 2, Leningrad 22, USSR
BONNET Professor Albert L M Institut de Botanique, 5 Rue A Broussonet, 34 Montpellier, France
BRAITHWAITE Dr A F Sherwood Hall, University Park, Nottingham
BRIGHTMAN Mrs Eileen M 2 Red Oak Close, Orpington, Kent
CARR W A 9 Cissbury Road, Tottenham, London N 15
CARTER AND SHARP, HAZELDENE NURSERY Upper Moors Road, Brambridge, Eastleigh, Hants
CHAPMAN D I East Lodge, Lanwades Park, Kennett, Newmarket, Suffolk
CHAPMAN P R ARPS 28 Braemar Avenue, Wimbledon Park, London S W 19
CHARLES Geoffrey Pheasants, Mill End, Hambleden, Henley-on-Thames, Oxfordshire
COLORADO UNIVERSITY LIBRARIES Acquisitions Dept, Boulder, Colorado 80302, USA
DARDENNE P D 10 Herga Court, Harrow-on-the-Hill, Middlesex
DEMIRIZ Assist Professor Dr Husnu Posta Kutusu 705, Sirkeci, Istanbul, Turkey
DYER T Lloyd 80 Park Road, Alrewas, Nr Burton-on-Trent, Staffs
EMBERTON Mrs Sybil C Little Close, Linkside, Hindhead, Surrey
FARISH R M The Homestead, Quendon, Saffron Walden, Essex
GLADSTONE Maurice D Pershore Institute of Horticulture, Pershore, Worcs
HOPKINS G P 80 High Howe Lane, West Howe, Bournemouth, Hants
HUGHES W Elfyn Trewern, Craig-y-Don Road, Bangor, Caernarvonshire
JARDIN BOTANIQUE Direction du Parc de la Tete D'Or, 69 Lyon, France
JENKINS Mrs E J Hodsock Park, Langold, Worksop, Notts
KURATA Dr Satoru, Inst of Forest Botany, Faculty of Agriculture University of Tokyo, Yayoi-cho, Bunkyo-ku, Tokyo, Japan
LEATHERMAN Mrs Sylvia B 2637 North Lee Avenue, South el Monte, California 91733, USA
LEEDAL J C 15 Lindisfarne Road, Shipley, Yorks
LE GROS A E 155 Glenfarg Road, Catford, London S E 6
LELLINGER Dr David B Division of Ferns, Smithsonian Institution Washington 25, DC, USA
MANNING C A A Orchard Cottage, Old Romsey Road, Cadnam, Hants

MARSHALL E Flat 2, 661 Lord Street, Southport, Lancs
MAXWELL ROBERT AND CO LTD 1-8 St Clements, Oxford
MICHIGAN UNIVERSITY General Library, Ann Arbor, Michigan 48104, USA
MOENS Professor Dr P Tomberg 125-127, Bruxelles 15, Belgium
MORAY The Right Hon Barbara, Countess of, Hornes Place, Appledore, Kent
PARKER OF WADDINGTON The Lady Pile Oak Lodge, Donhead St Andrew, Shaftesbury, Dorset
RANSOM Mrs Elizabeth D M 3 Garwoods, Norton Mandeville, Ingatestone, Essex
RICKARD Martin H 124 Birdwood Road, Cambridge
ROBERTS R H Quinton 51 Belmont Road, Bangor, Caernarvonshire
RUSSELL David 20 York Avenue, Stanmore, Middlesex
RUSSELL J P C Nursery Court, Windlesham, Surrey
SCUDDER James H 1361 52nd Avenue North, St Petersburg, Florida 33703, USA
SPENCER G D Eton Hill House, Eton Hill Road, Radcliffe, Lancs
ST CLAIR-MORFORD Mme E 5 Boulevard Edouard VII, 06 Nice-Cimiez, A M, France
THOMSEN Hugo Kirkegade 60, Ikast, Denmark
TINGEY Mrs B J 4 Ventnor Gardens, Barking, Essex
TINGEY F J 4 Ventnor Gardens, Barking, Essex
TRYON Dr Alice F Gray Herbarium, Harvard University, 22 Divinity Avenue, Cambridge 38, Mass 02138, USA
UNIVERSITY COLLEGE OF SWANSEA The Library, Singleton Park, Swansea, Glam
VINCE A A P Oaklands House, Welwyn, Herts
WHEELER Mrs Sylvia R G 47 Cambridge Road, Sawbridgeworth, Herts
WILLMOT A 19 Chalsey Road, London S E 4
WORLAND Anthony J 5 Fen Road, Cambridge
YOUNG M J 59 Northumberland Avenue, Cliftonville, Margate, Kent

FINANCIAL STATEMENT AS AT 30 JUNE 1967

ORDINARY ACCOUNT

1965/6	1966					£		
£ 10	30 June To	Balance				76	14	9
198		Subscriptions				320	0	0
17		Donations				12	11	5
150		Grant-in-aid from Royal Society				75	0	0
		Sales -	£					
96		Gazettes	128	8	10			
1		Census lists		5	4			
-		Fern Books	6	5	0			
-		Reprints	5	18	4	140	17	6
-		Interest on Special Account				6	9	8
						£ 631	13	4
	1967 30 June To	Balance				£ 171	10	7

1965/6				£		
£	By	Subscriptions -	£			
3		Council for Nature	3 0 0			
3		Royal Hort Society	3 3 0			
1		American Fern Society	1 8 8			
3		Upper Teesdale Defence Fund	3 0 0	10	11	
239		Payment to Devonshire Press Ltd cost of Gazette Vol 9 Part 8		233	13	
30		Printing and Stationery		25	13	
-		Part refund loan to A C Jermy		25	0	
20		Secretarial and Editorial Postages		31	4	
96		Transfer to Special Account		134	0	
		BALANCE AT 30 JUNE 1967		171	10	
				£ 631	13	

SPECIAL ACCOUNT

1965/6	1966		£		
£ 70	30 June To	Balance	166	0	0
96		Transfer from Ordinary Account on 30 June 1967	134	0	0
			£ 300	0	0
1967 30 June To	Balance		£ 300	0	0

		£	
By	BALANCE AT 30 JUNE 1967	300	0
		£ 300	0

APPENDIX 3

LIST OF FERN NURSERIES

NOEL BROOKFIELD 102 Stamford Road, Birkdale, Southport, Lancs	HARDY
THOMAS BUTCHER Wickham Road Nursery, Shirley, Near Croydon, Surrey	MAIDEN-HAIR
EBFORD NURSERIES Tupsham, Exeter, Devon	
HAZELDENE NURSERY Upper Moors Road, Brambridge, Eastleigh Hants	GREEN-HOUSE & HARDY
HIGHLANDS WATER GARDENS Rickmansworth, Herts	HARDY
HILLIER AND SONS Winchester, Hants	HARDY
W E TH INGWERSEN LTD Birch Farm Nursery, Gravetye, East Grinstead, Sussex	ALPINE
REGINALD KAYE LTD Waithman Nurseries, Silverdale, Carnforth, Lancs	HARDY
KINSLEY GARDENS High Howe Lane, Bournemouth 3	HARDY
NEWLAKE GARDENS New Chapel Road, Crawley, Sussex	HARDY
PERRYS HARDY PLANT FARM Theobalds Park Road, Crews Hill Enfield, Middlesex	HARDY
MAURICE PRITCHARD AND SONS LTD Riverslea Nurseries, Christchurch, Hants	HARDY
ROPHELL (HORTICULTURE) P R Swindells, Fairhaven, Caldecote, Cambridge	HARDY
SUNNINGDALE NURSERIES Windlesham, Surrey	HARDY

FERN LITERATURE - A SELECTION

AMERICAN FERN JOURNAL 1910 onwards (devoted to taxonomy, biology and growing of ferns)

Ashberry Anne BOTTLE GARDENS AND FERN CASES 1964 Hodder & Stoughton, London (dealing with the modern adaptations of the Victorian Wardian Case, and the care of plants in them).

Bower F O THE FERNS (FILICALES) 1923/8, 3 Vols, Cambridge Botanical Handbooks, University Press, Cambridge. (A classic treatise on phylogeny).

Brightman F H THE OXFORD BOOK OF FLOWERLESS PLANTS 1966 Oxford University Press. (For identification of common seaweeds, fungi, mosses, lichens, and ferns in Britain, with 96 colour plates).

BRITISH FERN GAZETTE 1909 onwards (Botany, natural history and variation in ferns).

Britten J EUROPEAN FERNS 1879/81 Cassell, London. (An excellent popular account of the European ferns).

Cobb Boughton A FIELD GUIDE TO THE FERNS 1956 The Riverside Press, Cambridge, Mass. (Deals with the ferns and their related families of Northeastern and Central North America).

Druery C T CHOICE BRITISH FERNS 1888 Upcott Gill, London, (Describes the varieties and their culture).

Druery C T THE BOOK OF BRITISH FERNS 1902 Country Life, London (Written for the British Pteridological Society, listing the best of the existing varieties).

Druery C T BRITISH FERNS AND THEIR VARIETIES 1910 Routledge, London. (A standard work on the varieties, illustrated with 40 coloured plates, 96 nature prints, and 319 woodcuts etc.)

Eberle Georg FARNE IM HERZEN EUROPAS 1959 Dr Waldemar Kramer, Frankfurt-am-Main (Deals with Central European ferns and hybrids. Written in German, but invaluable for its 90 excellent fern photographs).

Edwards Rev Z J THE FERNS OF THE AXE 1866 Hamilton Adams, London. (Describes the species and varieties found in the valleys of the Axe and its tributaries).

Foster F G THE GARDENERS FERN BOOK 1965 Van Nostrand, New York, Toronto, and London (Growing ferns - from the American standpoint).

Francis G W ANALYSIS OF THE BRITISH FERNS AND THEIR ALLIES 1837 Simpkin Marshall, London. (An early book describing the species and listing habitats, which ran through several editions).

Heath F G THE FERN WORLD (11th ed) 1908 Everett, London. (Describes the ferns, their distribution, and fern districts, in popular style).

Heath F G BRITISH FERN VARIETIES 1912 Kelly, London. (Deals with species and some of the best varieties, in a popular way).

Hibberd Shirley THE FERN GARDEN 1869 Groombridge, London. (A garden book for beginners).

Hires Clara S SPORES - FERNS - MICROSCOPIC ILLUSIONS ANALYSED 1965, Mistaire Laboratories, Millburn, New Jersey, USA (A detailed microscopic study of spores with excellent photomicrographs).

Holttum R E FERNS OF MALAYA being Vol 2 of "A Revised Flora of Malaya", 1954, Government Printing Office, Singapore (The leading botanical treatment with keys and illustrated).

Hooker, W J SPECIES FILICUM 5 Vols 1846/64, Pamblin, London. (Describes in detail upwards of 500 species).

Hooker W J and Baker J G SYNOPSIS FILICUM 1868 Hardwicke, London. (Synopsis of all known ferns, based chiefly on "Species Filicum". Completed by J G Baker after Hooker's death).

Hooker W J THE BRITISH FERNS 1861 Lovell Reeve, London. (Sixty six coloured plates with accompanying descriptions of ferns and allies).

Hyde H A and Wade A E WELSH FERNS ed 4 1962, National Museum of Wales, Cardiff. (One of the most useful handbooks available today, and includes all the British species).

Johnson G W THE BRITISH FERNS 1861 The Horticultural Press, London. (A popular history, with descriptions, distribution and cultivation methods).

Leatherman Sylvia B and Behrends Dorothy S LEARN OF FERNS WE GROW 1965 B & L Books, South el Monte, California. (Ferns for the house and mild climates, growing methods and spore culture).

Linton W J THE FERNS OF THE ENGLISH LAKE COUNTRY 1855 Hamilton Adams, London. (Lists the species and varieties of the area).

Lowe, E J OUR NATIVE FERNS 2 vols 1865/7, Groombridge, London. (Contains descriptions of 50 species and 1294 varieties of British ferns, with 79 coloured plates and 909 wood engravings).

Lowe E J FERNS : BRITISH AND EXOTIC 8 vols 1855 Bell & Daldy, London. (Describes ferns, indigenous and introduced, with 499 beautifully executed full-page colour plates).

Lowe E J NEW AND RARE FERNS 1871 Bell, London. (A follow-up to "Ferns : British and Exotic" describing more ferns, with a further 72 similar plates).

Lowe E J BRITISH FERNS AND WHERE FOUND 1891 Young Collector Series. Swan Sonnenschein, London. (A small handbook most useful for reference, listing and describing 45 species and 1859 varieties. Ed 2 Allen & Unwin, London, 1908 lists 1861 varieties).

Lowe E J FERN GROWING 1895 Nimmo, London. (Describes 50 years experience in crossing and cultivating ferns).

Macself A J FERNS FOR GARDEN AND GREENHOUSE 1952 Collingridge, London. (A gardeners' book on growing ferns).

Manton I PROBLEMS OF CYTOLOGY AND EVOLUTION IN THE PTERIDOPHYTA 1950, University Press, Cambridge. (An important botanical work).

Moore T THE FERNS OF GREAT BRITAIN AND IRELAND Folio ed 1855, edited by J Lindley, nature-printed by H Bradbury, Bradbury & Evans, London. (A magnificent folio work with 51 full-page nature-prints in colour).

Moore T NATURE-PRINTED BRITISH FERNS 2 Vols 1859/60, Bradbury & Evans, London. (An octave edition of "The Ferns of Great Britain and Ireland", describing the species and many varieties with 114 nature-printed plates in colour).

Moore T THE HANDBOOK OF BRITISH FERNS 1848 Groombridge, London. (Dealing with species and varieties).

Moore T A POPULAR HISTORY OF BRITISH FERNS 1855 Lovell Reeve, London. (A simplified handbook for beginners, dealing with the species and localities).

Moore T BRITISH FERNS AND THEIR ALLIES 1881 Routledge, London. (Virtually an abridgement of "A Popular History of British Ferns").

Moore T BRITISH FERNS AND MOSSES Ward Lock & Tyler, London. (A cheap edition of "British ferns and their allies").

Newman E A HISTORY OF BRITISH FERNS AND ALLIED PLANTS 1844 Van Voorst, London. (An interesting early historical account. The later editions include ferns only).

Parsons Frances T HOW TO KNOW THE FERNS 1961 "2nd edition" Dover Publications, New York, and Constable, London. (A modern reprint of a popular work first published in 1899 on North American species).

Pratt A THE FERNS OF GREAT BRITAIN AND THEIR ALLIES 3rd ed 1862, S P C K, London. (Sixty-two species described and illustrated by 41 plates in colour).

Schneider G THE BOOK OF CHOICE FERNS 3 Vols 1892/4, Upcott Gill, London. (A comprehensive dictionary of species and varieties in great detail).

Schneider G CHOICE FERNS FOR AMATEURS 1905 Upcott Gill, London. (An abridged edition of "The book of choice ferns").

Smith Rev Gerard THE FERNS OF DERBYSHIRE 1869 Bemrose, London. (Descriptions of local ferns with excellent full-page coloured plates).

Sowerby J E THE FERNS OF GREAT BRITAIN 1855 Sowerby, London. (Description of species and some varieties with full-page black and white drawings).

Step E revised by Jackson A B WAYSIDE AND WOODLAND FERNS 1945 Wayside and Woodland Series, Warne, London. (All British species described with some good photographs).

Stokoe W J THE OBERSVER'S BOOK OF FERNS 1961 Warne, London. (45 species described and illustrated in colour and half-tone).

Taylor P G BRITISH FERNS AND MOSSES 1960 The Kew Series, Eyre & Spottiswoode, London. (A descriptive book well illustrated).

Wherry E T THE FERN GUIDE 1961 Doubleday Nature Guides Series, New York. (Covers Northeastern and Midland United States and adjacent Canada with cultivation notes).

Wherry E T THE SOUTHERN FERN GUIDE 1965 Doubleday Nature Guides Series, New York. (Covers Southeastern and South-Midlands United States).

Williams B S SELECT FERNS AND LYCOPODS 1868 Williams, London. (Description of 900 choice species and varieties, British and Exotic, and cultural instructions).

PLEASE COMPLETE AND RETURN AS SOON AS POSSIBLE, AND NOT LATER THAN 31 MARCH

To: Mr R F Cartwright, 143 Pittmansfield, Harlow, Essex.

I hope to attend the Meetings marked "X" below.
Please keep me informed.

	Mark "X"	Travelling by car	No of spare seats	Request lift by car	Making own arrangements
Fern Houses, Kew Saturday 11 May					
Oxford & Mrs Gurney Saturday 8 June					
Mr Thomas Saturday 6 July					
Ashdown Forest Weekend 19/21 July					
Arran Week 24/31 August		IMMEDIATE	ADVICE	REQUIRED	
Annual Excursion Week 31 Aug/7 Sept					

NAME .....

ADDRESS .....

.....

THE BRITISH PTERIDOLOGICAL SOCIETY

PROGRAMME FOR 1968

Saturday 17 February	Indoor Meeting at the British Museum Natural History), Cromwell Road, London, S W 7, at 4 pm. Conversazione with buffet supper. There will be various exhibits, discussions, and the opportunity for members to show fern photographs, slides and films. Please bring yours along.
Saturday 11 May	Visit to the Fern Houses at Kew Botanic Gardens. Meet at 2.30 pm outside the Fern Houses.
Saturday 8 June	*Visit to Mrs S G Gurney's garden at Boars Hill, near Oxford, at 2 pm. This will be preceded by a visit to the Oxford Botanic Gardens. Meet at the main entrance at 11 am. (SEE NOTES 1, 2 and 3).
Saturday 6 July	*Visit to Mr G S Thomas's garden at Briar Cottage, Fairfield Lane, West End, near Woking, Surrey, at 2.30 pm. (SEE NOTES 1, 2 and 3).
Tuesday/Wednesday 9/10 July	Fern Exhibit at the R H S Fortnightly Show in their Halls at Westminster, London S W 1 (SEE "FERN SHOWS" IN THE NEWSLETTER).
Friday/Sunday 19/21 July	*Weekend Meeting in Ashdown Forest. Centre will be The Hook Farm, West Hoathly, Sussex, and <u>early application</u> for accommodation should be made to the Proprietrix, Mrs A J Buckley. (SEE NOTES 1 and 2, ALSO "MEETINGS" IN THE NEWSLETTER).
Wednesday/Friday 21/23 August	Southport Flower Show. (SEE "FERN SHOWS" IN THE NEWSLETTER)
Saturday/Saturday 24/31 August	*Pre-Excursion Meeting to be held on the Isle of Arran. Further details will be sent only to interested members who <u>must</u> advise the Meetings Secretary <u>immediately</u>. (SEE "PROGRAMME FOR 1968" IN THE NEWSLETTER).
Saturday/Saturday 31 August/ 7 September	*The Annual Excursion in Argyllshire. The centre will be Dalmally at the head of Loch Awe, and it is hoped to make our headquarters at the Carraig Thura Hotel, Loch Awe.

Saturday 19 October	The Annual General Meeting to be held at the British Museum (Natural History), Cromwell Road, London S W 7 at 3.30 pm TO BE FOLLOWED BY an Indoor Meeting with talks and discussions. Tea will be available. It is hoped to arrange a visit to the Department of Botany for those who can arrive at the Museum at 2.30 pm.
NORTHERN MEETINGS	Mr N Robinson will arrange day and/or weekend meetings in the North of England, PROVIDED THERE IS SUFFICIENT SUPPORT. Interested members should contact Mr Robinson, 27 Yewlands Drive, Fulwood, Preston, as soon as possible, He will welcome suggestions for dates and places to visit.
NOTE 1	With the exception of the Annual General Meeting, further necessary information regarding the Meetings, in particular those marked with an asterisk, will be advised only to members who complete and return the enclosed Meetings Form to the Meetings Secretary.
NOTE 2	For the Meetings marked with an asterisk, private car transport will be used. Please mark the Form accordingly. It may be necessary to hire a mini-bus for the Annual Excursion.
NOTE 3	Members planning to come on the visits to Mrs Gurney and Mr Thomas must advise the Meetings Secretary well beforehand, and not later than the end of March, so that our hosts will know how many are coming. A route can be supplied, if required, to enable members to find Mr Thomas's address.
NOTE 4	Information regarding hotels and other accommodation at Dalmally can be obtained on request from the Meetings Secretary.

Eb

THE BRITISH PTERIDOLOGICAL SOCIETY

NEWSLETTER

No. 6

DECEMBER, 1968

JAN 27 1969

GARDEN LIBRARY

Secretary

J. W. DYCE, 46 SEDLEY RISE,
LOUGHTON, ESSEX.

NEWSLETTER No. 6 DECEMBER 1968

EDITED by
The Secretary J W Dyce

EDITORIAL

I am very pleased to record that the last issue of the Newsletter in its new format seems to have met with what can be termed 'universal' approval - in fact, embarrassingly so at times, for many of our university and other institutional subscribers, abroad as well as at home, have written requesting me to supply them with the first four numbers, as well as to continue sending future issues. The first four issues are hardly the kind of material to adorn the shelves of their learned libraries, but with the few spare copies left in my possession I have been able to comply with some of the requests to enable sets to be completed. Future issues will be sent to all subscribers as well as to members, with no increase in the annual subscription. Their primary purpose will be to provide material acceptable to members interested in the finding and growing of ferns and their varieties, and other pursuits of a non-technical nature, and through this medium we hope to satisfy the needs of the many members who find the Gazette too technical and have been feeling they get very little out of the Society.

The running of a society such as ours poses problems. We started nearly 80 years ago as a horticultural society, but unlike dahlias, delphiniums and other garden flowers, ferns have a strong botanical interest like mosses and lichens, and it was inevitable that botany should creep into the Society. We are now betwixt and between with a foot in each camp - two societies welded together, a horticultural society like the many flower societies and a botanical society like the Bryological and Lichen Societies. Fortunately, I am equally interested in both sections, but have to work more strenuously on the horticultural side to help redress the balance which at all times has a tendency to swing in favour of the botanists. And so the Newsletter has been developed in its present form to counteract this swing and will, I hope, accomplish its purpose.

I would add, however, that I am no second Druery who could churn out fern articles ad lib, so much so that the early volumes of the Gazette consist very largely of his writings, and I invite members to supply me with contributions on matters relating to ferns which will interest their fellow members.

SUBSCRIPTIONS

Subscriptions became due on 1 July last, and those still unpaid should be remitted without delay to the Treasurer.

THE ANNUAL GENERAL MEETING

Reporting on the Annual General Meeting is a very convenient way to review the progress and happenings in the Society during the past year. This year it was held on Saturday, 19 October at the British Museum (Natural History) in London, and was attended by a large representative gathering of members. The Secretary reported a continued steady growth in our membership with about 40 new members, bringing the strength after allowing for wastage up to almost 300. Field meetings are increasing in number and we hope to increase them even more in the coming year. It would seem, however, that as a Society we are not very much interested in showing ferns, and the Fern Display which we planned for the R H S Fortnightly Show in July had to be cancelled because of lack of support. The early volumes of the British Fern Gazette continue to sell well, and at last we have been successful in getting the first five volumes reprinted at a reasonable cost by one of the modern photographic processes. Already many of these have been disposed of to subscribers and members.

We have had no further Grant-in-Aid from the Royal Society, but their help over the past three years has enabled us to stabilise our position, and our finances are now in a healthy condition. We finished the year with a smaller balance than our opening one, but not excessively so, and our present rate of development should take care of this in future years.

The Gazette was badly delayed this year by the printers who were disorganised by a removal into new premises. This issue commenced a new volume, No 10, and the opportunity was taken to make some changes, and increase the page size to

FINANCIAL STATEMENT AS AT 30 JUNE 1968

ORDINARY ACCOUNT

1966/7	1967						1966/7					
	30			£						£		
£ 76	June	To Balance		171	10	7	£	By	Payment to Devonshire Press Ltd - cost of			
320		Subscriptions		313	9	6	233		Gazette Vol 10 Part 1 EST	270	0	0
12		Donations		8	3	11			Payment To Metloc Secretarial Services - cost			
-		do Publications Fund		38	0	0	-		of Newsletter Vol 1 No 5	31	8	0
		Sales -	£						Subscriptions -	£		
128		Gazettes	76 6 8				1		American Fern Society	1 13 3		
-		Census lists	5 4				3		Council for Nature	5 1 0		
		Fern							Royal Horticultural			
6		Books	6 6 6				3		Society	3 3 0	9 17	3
6		Reprints	7 19 6	90	18	0	25		Printing and Stationery		36 15	6
		Interest on							Secretarial and Editorial			
6		Special Account		13	11	8	31		Postages		31 3	3
									Transfers to Special Account -			
							134		Reprinting Fund		75 0	0
							-		Publications Fund		38 0	0
									BALANCE AT 30 JUNE 1968		143 9	8
				£ 635	13	8				£ 635	13	8

1968		
30 June	To Balance	£ 143 9 8

NOTE

We still await the final figure for the cost of printing the Gazette, and £270 shown above is the estimated figure. The final balance is therefore subject to alteration when the exact figure is known.

REPRINTING FUND

		£					£		
1967									
30 June	To Balance	300	0	0					
1968					1968				
30 June	Transfer from Ordinary Account	75	0	0	30 June	By Balance	375	0	0
		£ 375	0	0			£ 375	0	0
1968									
30 June	To Balance	£ 375	0	0					

PUBLICATIONS FUND

		£					£		
1968					1968				
30 June	To Transfer from Ordinary Account	38	0	0	30 June	By Balance	38	0	0
1968									
30 June	To Balance	£ 38	0	0					

one which is much more serviceable for this type of publication. Many favourable comments have been received, and the Gazette in its new format should do much to enhance the reputation of the Society, and attract subscribing members on a worldwide basis in ever increasing numbers.

Our President, Dr James Davidson, was elected for a third term of Office. One of our Vice-Presidents, Dr T D V Swinscow, has resigned from the Office, and his place has been filled by Mr Fred Jackson, one of our outstanding members from the Lake District who is both an expert grower of ferns and an amateur fern botanist of note. The Officers have all been re-elected, and we are pleased to welcome Dr F M Jarrett of the Kew Herbarium as an additional Editor. On the Committee we lose the services of Messrs T A Dyer and F J Healey who retired in accordance with our Rules and we place on record our thanks to them for their contributions to the running of the Society over many years. Dr Jarrett as an Editor, also retired from the Committee, and the three vacancies were filled by Mrs E M Brightman, Messrs F J Tingey and A J Worland. Last year Mr N Robinson retired from the Committee, but as Northern Meetings Secretary retained his place on a co-opted basis. We regret that owing to ill-health he has had to resign from the Office, and our warmest thanks are due to him for his work on behalf of the Society, coupled with the wish that his health improves.

MEETINGS

Except for the Annual Excursion, meetings of the Society tend to concentrate in the London area, and we are very conscious of the fact that members are unlikely to travel long distances for a meeting lasting only one day or even a weekend. Because of this, for several years we have advertised a Northern Meetings programme but this has been very poorly supported in spite of the fact that our membership is strong in the north and the whole area rich in ferns. Is it that our northern members are not interested in meeting each other in the field to enjoy the companionship of fellow enthusiasts and the pleasures of the hunt, or is our organisation at fault ? We are anxious to make the Society meeting-minded, and this year the Secretary organised two weekend meetings additional to those included in the Programme. One was in South Wales in May during a visit to Mr R M Payne living near Cardiff, and the other in the Lake District while on his way home after a visit to Scotland in June. Members within reasonable distances of the venues were circulated earlier as soon as his plans for the visits were fixed, and the response justified the efforts.

There are many other parts of the country where similar meetings could be equally successful with up to half a dozen or more members attending, but it is obvious that a few enthusiastic members living in suitable centres throughout the country, willing to devote some time to planning and circularisation of the members in their districts, are needed to get a regional meetings programme started. Once begun and the meetings publicised in the Newsletter, attendances would probably increase. Centres visualised are North Wales, South Wales, the West Country, the Lake District, the Midlands, the North of England, and South Scotland. The omission of the North and West of Scotland will be noted, and it is a remarkable fact that our members north of the Edinburgh/Glasgow line can almost be counted on the fingers of one hand - and this in one of the most fern-rich parts of the British Isles. Ireland, too, both in the north and south, seems to be singularly lacking in fern enthusiasts, and again this is a country with an abundant fern flora. Can it be that the very super-abundance of ferns in those countries is our enemy - familiarity in the eye of the beholder breeding contempt for these plants ? There is a challenge here for us.

Our indoor winter meetings are always very well attended, taking the form of Conversaziones with buffet meals held at the British Museum (Natural History), and the facilities kindly granted to us by the Museum Authorities are excellent for our purpose. Talks on fern photography and on spores at the Spring meeting, and a visit to the Department of Botany at the Museum during the Autumn meeting, were the high lights of these meetings. Day meetings included visits to the Fern Houses at Kew, and to Mrs S G Gurney at Boars Hill, Oxford, and Mr G S Thomas at West End, Woking, to see their delightful gardens. The weekend meeting in Ashdown Forest attracted many members, and we were much more fortunate with the weather than last year, which enabled us to hunt in greater comfort and to see many more ferns, including the rare ones Hymenophyllum tunbrigense and Dryopteris aemula, and to do some photography. The additional weekend meetings in South Wales and the Lake District were obviously not so well attended due to lack of publicity. The Lake District meeting was made memorable to the Secretary by the finding of a very fine Polystichum setiferum variety, of which more anon.
See NEW FERN VARIETY FINDS.

FERN SHOWS

I have commented on the fact that our meetings tend to concentrate in the south, and that we have been unable to get them going in the north, but the reverse obtains when it

comes to showing ferns. In the north we have a stronghold of exhibitors, and Southport Flower Show is their Mecca. To see British fern varieties in abundance and at their best, this is the place to go. In the south there are very few, if any, collectors capable of putting up good fern exhibits. At one time it was very different, and in the latter half of the last century the R H S Shows were inundated with ferns. I have extracted old records which show that 750 ferns received awards at the Shows in the period 1859/1900, 106 in 1901/1945, and 9 in 1946/65. Today only the occasional fern is put up, but these plants are returning to popularity and we hope that more will be exhibited in the future. In the summers of 1966 and 1967 the Society staged fern exhibits at R H S Shows. The plants were not of exhibition standard and were merely displays for advertising purposes - as such they were successful and the Royal Horticultural Society encouraged us by the award of a Lindley Medal on each occasion. However, only very few members made any contribution to the plant material required and the work involved, and this year the continued lack of interest and support led to the cancellation of the Display which was planned for the Show on 9/10 July. This is a backward step which has been very disappointing and does not help to improve our image in the horticultural field, nor with the R H S with whom we have been discussing the possibility of forming a Joint Committee for Ferns to encourage the growing and showing of these plants. Until we as a Society can demonstrate that we have the members and the ability to put up first-rate exhibits of ferns at the Shows, the R H S will not consider our proposal. If even a few of our members in the south - we cannot expect northern ones to travel long distances to southern shows with bulky plants liable to damage en route - interested in the growing of exhibition ferns could get together to form a show section, we would get somewhere, for the very existence of such a section would, I am sure, encourage other members to bring along well-grown pet plants in support of Society exhibits at the Shows.

At the R H S Show on 8/9 October, the Royal Botanic Gardens at Kew gave a great boost to fern growing by staging a most magnificent display of greenhouse ferns under the supervision of Mr H J Bruty, BEM, who also lectured on the 'Cultivation of Ferns at Kew'. No one knows more about the growing of ferns than Mr Bruty whose work at Kew was recognised a few years ago by the award of the British Empire Medal. Both his lecture and the magnificence of the Display which is thought to be the finest fern exhibit ever staged at the R H S Shows, were fitting tributes to his knowledge and skill as a grower.

At Southport Flower Show our Society has a Stand in the Specialist Plant Societies Tent, manned by Messrs N Robinson and B Hayhurst. This year they were assisted by Mr N Brookfield. Both Mr Brookfield and Mr Hayhurst are well-known fern growers who put up large first-rate exhibits at the Show, and for many years now Mr Brookfield has won the Silver Perpetual Challenge Trophy presented by our Society for the best large display of ferns. With these gentlemen in attendance, enquiries on fern matters at our Stand were assured of expert attention. Members visiting the Show are invited to seek out the Stand and make themselves known to our representatives who will be pleased to meet them. We badly need more help, I hasten to add, so I shall finish with -
WANTED - volunteer members willing to devote some time during the three days of Southport Flower Show to help on the Society's Stand in the Specialist Societies Tent.

HISTORY OF THE SOCIETY by J W Dyce

(The many new members of recent years may appreciate the publication of a brief history of the Society. The Secretary recently wrote such a history for the Wild Flower Magazine, and acknowledges with thanks permission granted to reproduce it here. This presents the opportunity also to state that Mr J A Crabbe is working on a full detailed history, and any information or photographs concerning our early days will be welcomed by him.)

About the middle of the last century a major interest was created by the discovery that our native ferns were producing in the wild, variations which made desirable garden plants. Books were written in vast numbers, and a society formed in 1871, the British Pteridological Society, of which very little is knownapart from an Occasional Paper No 1, published in 1875, which shows that the officers and members included most of the well-known fern hunters and collectors of the day. This Paper promised others to follow, but alas ! from then on the Society disappears from our ken, and we have been unable to discover anything more about it. The writer would be grateful for any information, however trivial, or particulars of any papers concerning this early Society which anyone may possess.

In 1891 the Lake District fern collectors banded together to form the Northern British Pteridological Society - the 'Northern' was dropped a year later. The annual subscription was 5s, and one official meeting was held annually on the August Bank Holiday at some local centre to transact their business affairs, hunt for ferns and hear a talk from one of their number. These meetings and talks are fully recorded

in their Annual Reports, published from 1894 to 1905, which contain much valuable fern information and lore, contributed by the foremost fern experts of the time. Among them were C T Druery and Dr F W Stansfield, our two outstanding authorities on British ferns, who with other southern fern men, among them the survivors of the 1871/75 Society, were quickly attracted to the new Society and contributed greatly to its future success.

C T Druery was a most gifted writer, and in 1909 the British Fern Gazette was born under his able editorship. In fact this remarkable man literally carried the Gazette, publishing four issues annually, most of the articles written by himself. He had a phenomenal knowledge of ferns and their varieties and was the discoverer of apospory, that is, the production of prothalli by direct outgrowth on the fronds of certain fern species which by-passes the normal spore stage in reproduction. Druery was invited to lecture to the Linnean Society on his discovery which opened up a new field of investigation by botanists. With the publication of the British Fern Gazette, the Society almost overnight quadrupled in size, members coming in from all parts of the British Isles, also from U S A, Canada, Rhodesia, France and Austria. From 1910 till his death in 1917 Druery was Secretary as well as Editor, and the Society flourished in his capable hands.

The death of Druery and the First World War, then reaching a crucial stage, led to a suspension of activities, except for the publication of the Gazette which continued to appear quarterly under the editorship of Dr F W Stansfield. He and W B Cranfield kept the Society going and membership built up again to about 100 when activities recommenced in 1920. The subscription was raised to 10s but in 1922 the economic effects of the war made it necessary to reduce the Gazette issues to two annually. Dr Stansfield was also a prolific writer on fern matters, but other members were now contributing more and the Gazette became less of a one-man effort. The Doctor assumed the additional office of Secretary in 1921, and like his illustrious predecessor carried both offices in his stride until his death in 1937.

With his death another crisis was precipitated. Cranfield, the President since 1920, assumed more active control, while A H G Alston, Assistant Keeper of Botany and in charge of the Fern Herbarium at the British Museum (Natural History), became Editor and P Greenfield, Dr Stansfield's son-in-law, was appointed Secretary. With a botanist as editor and a lack of enthusiastic fern-variety writers, together with a decreasing popularity in ferns, the Society entered into a

decline and during the Second World War closed down completely. Only the hard work and devotion of a few dedicated members, foremost amongst them Greenfield, brought it slowly back to life in 1947, to struggle on depleted in numbers and vitality till 1958, when Alston, now the President, died and Rev E A Elliot , Editor since 1949, resigned after many years of indifferent health.

This marked the turning point in the history of the Society. Greenfield, now our Grand Old Man and the last of the old fern hunters, had retired from active office soon after the end of the War, but remained the power behind the throne. He had always felt strongly that the botanists should take more interest in fern variation, and at his suggestion, Alston's successor A C Jermy, a young keen fern botanist, was invited to become Editor. This choice has been a most happy one, although it changed completely the outlook of the Society, which now widened to include the botany of ferns and their allies on a worldwide basis, while still retaining its previous interest in fern variation. After the War the British Fern Gazette became an annual issue and this policy, for financial reasons, has perforce continued, but with the new outlook and new life infused into it from the first issue under Jermy's editorship, it attracted wide attention from botanists both at home and abroad, and membership has risen from about 80 to nearly 300. Fern growing is also becoming more popular again and there is a fairly even division between botanists, and collectors and growers of the fern varieties. Furthermore botanists are taking more interest in the varieties and, no longer tending to regard them as "monstrosities", recognise that they may hold the answers to many unsolved problems.

The hunting and growing of fern varieties is still regarded as an important function and field meetings attract botanists, hunters and growers, also beginners in all these categories who are always warmly welcomed. The 10s. subscription was raised in 1962 to 17s.6d. and again in 1966 to 25s. The work in the fern field has been recognised by the Royal Society who for three years gave monetary assistance towards publication costs, but with the last subscription increase and a rising membership the Society hopes to be self-supporting in future while still retaining the high standard it endeavours to achieve.

GAIT AND CASTLE CRAGS - A FERN LOVER'S PARADISE

By Fred Jackson

The places I am about to describe lie in one of the most beautiful parts of Borrowdale. I will take Gait Crag first, a fine bold cliff composed of Borrowdale volcanic rock intersected by slate veins and split by three more or less dry ravines in all of which grow *Asplenium septentrionale*.

On leaving the road one can climb boulder strewn and sometimes grassy slopes, covered with Lycopodium clavatum, to see a very pretty little plant of Athyrium filix-femina 'Cristata'.

After entering a usually dry gill, A. trichomanes appears from beneath almost every stone, with many plants of Polystichum aculeatum, and there are large clumps of Cryptogramma crispa everywhere. Reaching the foot of the Crag, there are a few plants of A. septentrionale and higher up, A. trichomanes, A. ruta-muraria and A. adiantum-nigrum, while among the heather and gorse, many plants of Blechnum spicant are to be found.

At the foot of the deepest ravine there is an outcrop of mineral lode and here grow a few plants of A. viride. Further round on the north face is a small cave, formed by large pieces of fallen rock, with a waterfall coming over the front. Behind this grows a colony of the finest plants of P. aculeatum I have ever encountered, and higher on the Crag I once collected a small Dryopteris dilatata which I have grown in my fern border for a number of years. It has never increased in stature or altered in any way, and the fronds are never any more than six to nine inches in length and are quite mature. I consider this to be the true D. dilatata var. nana of T Moore, not to be confused with D. assimilis which it somewhat resembles, but the pinnules are not so finely cut and it is sub-evergreen whereas the latter dies right back.

This place still retains a very pleasant memory for me, for it was hither that I once conducted a great friend of mine, our late member Dr S P Rowlands, when he wished to see A.septentrionale We did not meet very often, but through correspondence the fern knowledge he imparted to me has since proved invaluable. What a great little man he was, and his untimely death soon after retirement, was a sad blow to the Society, for had he lived, his articles would I am sure have still graced the pages of the Gazette. As we toiled up the boulder strewn slopes it started to rain, so we crept under the lee of a large rock for shelter and a breather. There in the gloom at the back was a very fine plant of A. septentrionale and the Doctor's day was made. However as the rain had now ceased we went on to the foot of the Crag and here were more plants of the fern. At the Doctor's request I climbed higher up the rocks and secured for him a fine plant of Dryopteris abbreviata. We spent the rest of the afternoon on the Crag, then the rain commenced again so we beat a hasty retreat and eventually arrived back at Stonethwaite drenched to the skin but quite happy. That was the last time I saw him.

Castle Crag is a fine dome-shaped hill standing like a sentinel guarding the Jaws of Borrowdale. It is of the same geological formation as Gait Crag, and the summit was once a Roman fort, the sandstone blocks of which it was built still lying scattered around. From here you look across the narrow valley at the famous Bowder Stone. The valley is so narrow here that there is only room for the river and the road. Soon after starting the ascent an old retaining wall is crossed under the lee of which is a large colony of Cystopteris fragilis. At the foot of the crags A. ruta-muraria and A.trichomanes grow, while a vertical cleft in the rock is full of A. adiantum-nigrum. Higher up under a large block offallen rock, is a variety of this fern which I call 'Variegata'. Parts of the moss covered rock are draped with Polypodium vulgare, and it was high up on the crags here that I discovered the great rarity, A. x murbeckii, which I at first took to be A. x alternifolium twice recorded in the past from this vicinity, once by a Miss Wright and also by Joseph Flintoft who constructed the famous model of the Lake District. I have searched this western aspect of the Crag in vain for this latter hybrid.

The northern slopes are densely wooded and here on the damp Sphagnum moss covered ledges grow fine colonies of Thelypteris phegopteris, while further on down the wood are large drifts of Gymnocarpium dryopteris with their wiry black stipes and bright green pinnae. In another part of this wood which is very damp and shady grow vast sheets of Hymenophyllum wilsonii. It covers most of the stones and rocks, and not content with this even climbs the trunks of trees. This is the place for anyone wishing to see this fern growing in profusion. On the higher more open slopes are many plants of Athyrium filix-femina, Dryopteris filix-mas, D. dilatata and D. borreri, while higher up again in a deep cleft in the rock are a few plants of Phyllitis scolopendrium. On the marshy ground near the river is an odd plant or two of D. carthusiana, and in most parts of the wood are many plants of B. spicant and T. limbosperma. I have noticed sometimes that the fronds of this last fern, just before the final dieback in Autumn, assume a beautiful ivory like tint if they have been growing in rather dry and shady places. They make very good material for anyone interested in floral art. Of course, Pteridium aquilinum is everywhere and there is a small colony of a variety of this fern 'Multifidum' lower down in the wood.

The eastern aspect of Castle Crag is composed mostly of slaty rubble from the disused quarries and there are literally hundreds of A. trichomanes growing there. Higher in a sheltered nook, is a good plant of Polypodium vulgare 'Auritum'. On some of the old quarry faces are many plants of A. adiantum-nigrum. On a sunny autumn afternoon, this is a never-to-be-

forgotten place, a carpet of bracken in bronze and russet, rowans brilliantly bedecked in scarlet and gold, birches in a mantle of bright yellow, and oaks a patchwork of green, gold and bronze. Winding like a silver ribbon, far below is the beautiful River Derwent and in the distance, Derwentwater sparkling like a jewel in a green and gold setting. All this and twentyeight species of ferns in less than half a square mile. Yea verily, a fern lover's Paradise !

ADIANTUM VENUSTUM By F J Healey

(Mr and Mrs Healey were proprietors of Lily Hill Nursery, Bracknell, Berks which specialised in ferns and water-lilies. A few years ago the Nursery had to be sold for building purposes under the Bracknell New Town Development Scheme.)

Our member, Mr Tony Vince, who visited me recently, commented on the form of my Adiantum venustum. This one was supplied about twenty years ago to my wife's former Lily Hill Nursery at Bracknell, Berks, (National Grid reference 41/883691), by Peter Koster of Boskoop.

It is a compact fern covering the ground very thickly, and quickly forming a mat of rhizome and fibrous root at ground level and below. The height is four to six inches. Here at Goring in Oxfordshire, (Grid ref 41/605811), it has swamped and eliminated a clump of Ipheion (Triteleia uniflora) and is striving with Tiarella cordifolia. I rate it as easily the choicest and best edging and ground covering plant for the shade border. It is slug-proof. I have never tried it on an exposed site, but in normal natural shade it has been unaffected by the hardest winter frosts of these twenty years. Young sprouts will be cut by late frosts, but it suffers no more from this than does bracken.

On transferring my ferns from Bracknell to Ascot, (Grid ref 41/907682), and later to Goring three years ago, I moved large clumps satisfactorily, but propagation from small scraps can be done so successfully that a well-tried method may be worth recording. The fern beds at the Bracknell Nursery were a couple of rods or so each, screened by growing bamboos, and shaded to some extent by oak trees. The propagation method called for (a) low barn cloches, darkened with green paint, (b) plenty of pebbles which I gathered from the nursery soil - flattish ones of about $1\frac{1}{2}$ inches, (c) poultry dung, as wheeled out from a deep-litter house, and (d) good neutral or slightly acid topsoil.

After rotavating the plot I marked out beds two feet wide, leaving two-foot paths between. I covered the beds with a three-inch depth of poultry manure, and topped this with two inches of topsoil, raking the surface level. The propagating material I used was 'Y' shaped pieces of rhizome with two budded tips. I worked from a board across the bed; this firmed it sufficiently. Allowing about five inches each way, I set each scrap of rhizome flat on the surface of the bed and used as many pebbles as necessary to hold it in this position and protect it from disturbance from worms. As I worked I covered the beds with the cloches, taking care that all was birdproof.

My Adiantum venustum beds were never neglected - this fern is a favourite of mine. I looked them over often, watered them frequently, and they quickly got into growth. To discourage surface growth among the pebbles I would progressively clear these away, and by autumn would have the whole beds covered with frondage, the best plants already fit to be sent out. In order to be able to offer presentable plants I kept the cloches on these nursery beds throughout the winter. One year I lost nearly all my glass under the weight of a foot of snow. The six-inch bottom glasses had, of course, been the first to go, but when I substituted asbestos-board - much costlier but almost indestructible - I had no more trouble.

The trick with Adiantum venustum is not to plant it in the soil. If you are planting a clump just scrape a sufficient hollow in the bed, set the clump on it and draw the soil up to its edges. If you then anchor it with a few stones against the birds - venustum makes fine nesting material - it will grow on cheerfully enough. Plant it otherwise and it may languish for years. If you want to make the most of limited material, set it with pebbles as I have described above. Do not neglect to guard against disturbance by birds. Have in mind two facts. The first is that while the living tips grow forward the dead rear ends will - if allowed to - curl upwards, inviting foraging blackbirds to tweak the plantlets out of the ground. The second fact is that blackbirds and thrushes can turn over largish stones and will peck out anything found beneath them. Cloches then, are recommended. If noneare available use stones of birdproof size - the plants will be happy enough underneath. If you must remove the stones before the plants have grown quite large, make sure you dispose completely of those tails of dead rhizome, or you will surely have cause for regret.

FERN PROPAGATION FROM SPORES

By J W Dyce

In the last issue of the British Fern Gazette, Volume 10, part 1, pp 13-20, Dr John D Lovis explains his methods used at Leeds University for propagation from spores for their extensive experimental work on fern hybrids. These methods cannot be bettered and a close study of them is recommended, even though the high clinical standards to which he works are unnecessary for ordinary purposes. In this article I am bringing the subject down to beginners' level with some additional information which may prove useful.

Raising ferns from spores can be most interesting, and exciting results can be obtained if spores from good varieties are used. This is an ideal way to build up a fern collection, and plants can be raised which it is impossible to beg, borrow or steal - or even buy - anywhere. When once a fern has departed from the normal, its spores will produce plants exhibiting a range of variation. Sowings from selected forms showing improvement on the parent, repeated through several generations, can evolve plants with the varietal characters so fully and wonderfully developed as to bear little or no resemblance to the original species. Rarely have such plants been found in the wild, because varieties as a rule are not so well equipped as normal species to withstand competitive conditions. Most of the finest varieties have been raised in cultivation where they have little or no fight for survival.

This introduction will give some idea of what can be achieved by spore sowing, but before we go on to the practical instruction a brief look at the spore and how it develops into a fern, will perhaps not come amiss for the beginner who has not stopped to ponder the differences between the flowerless and the flowering plants. The fertilising mechanism of the flower is obvious, the pollen being deposited on the stigma by various means and uniting with the ovum to form the seed. In the flowerless plants such as the ferns, the mechanism is not so obvious.

On the backs of their fronds, ferns like the Male Ferns and the Shield Ferns develop sporangia. Ripe sporangia are seen as brown heaps, and looked at through a strong glass, are like small bunches of grapes. These heaps are the sori, each containing a vast number of minute spores as fine as dust. When the sporangia are ripe and dry they split open, scattering the spores, and a single fern frond can produce millions of them. Very few survive to grow into ferns, for in natural conditions their minute size makes them vulnerable to many enemies, two of the chief being dry conditions and disturbance. Constant moisture is essential for their

development and for all the following stages until the young ferns are established, well demonstrated by the fact that ferns abound only in the wetter parts of the country where the embryo plants do not experience periods of drought.

Given suitable conditions, the spore, a single plant cell, begins to multiply and forms in the case of most ferns a small green scale, the prothallus, which is thin and often heart-shaped with fine hair-roots. This grows to about a quarter of an inch across, and on the underside sexual organs develop, archegonia - small tubular projections each containing a female egg, and antheridia - sac-like protuberances containing the male sperms. Ripe sperms are released into the essential film of moisture retained on the underside of the prothallus, and being equipped with motile hairs, called cilia, propel themselves towards a mature archegonium on either the same or another prothallus, attracted by a minute trace of acid exuded by archegonia when mature. Fertilisation is complete when a sperm fuses with an egg, which then commences to grow into a tiny fern.

This brief description should enable us to understand what happens when we sow our spores. These can be seen as a fine brown dust when a frond with ripe sporangia is shaken on a dry day. It is best, if possible, to gather the frond, or part of it, just before the spore-shedding stage is reached, when my practice is to shake it vigorously and blow hard on it to remove some at least of the many stray spores from other ferns which are certain to have settled on it. Next place it between clean sheets of white paper in a warm place, and in a day or two the sporangia will have dehisced, or burst open, covering the paper with spores, millions of them, many more than we shall need. The spores are sown evenly, and very very thinly, else there will be a congested growth of prothalli which will be unable to develop properly. Work with only one kind at a time and keep the others covered, for the slightest air-currents can blow them around and our sowings will be far from pure.

Because of the small size of spores and the many potential foes which exist in soil, the first thing to do is to sterilise the growing medium, a suitable mixture being equal volumes of loam, peat and sharp sand, filled to within about half-an-inch of the tops of pots or seed-pans. Boiling water is then poured over the compost until it is completely scalded and the water emerges at nearly boiling point from the drainage holes. This ensures that all worms, insects, fungi and mosses are killed off, and the spore sowings freed from all disturbance and competition. It is preferable to do this watering through paper laid over the compost as this

prevents puddling and caking of the surface. Immediately cover the containers with glass sheets to protect the sterilised soil from airborne spores, and when cool enough sow the selected spores, replacing the glass immediately. The containers are stood in saucers in which a little water is constantly kept, and placed in a well lighted spot but away from all sunlight - a north-facing window is very suitable. A little permanganate of potash in the water is a useful addition which can deter fungal growths on the soil surface. Label each container with the name of the variety sown.

These instructions give the basic principles for the propagation of ferns from spores, and many growers evolve their own modifications. Plastic pots with close-fitting clear plastic domes, known as mini-cloches, are available these days and are ideal for the purpose. Another simple way is to use clear plastic boxes, such as sandwich boxes with tight-fitting lids, which can be purchased cheaply in a variety of sizes. A half-inch layer of moist sterilised compost is spread over the bottom, the spores scattered, the lid replaced tightly, and the box can be put in a shady corner. No further attention should be needed until transplanting has to be done. A method passed on to me by one of our members, Mrs Elizabeth Coles, uses a moisture re-taining compost containing at least 50 per cent peat. The pots are crocked with charcoal, then half-filled with the compost, and ordinary growing moss gathered from walls is laid on top, leaving a space of about one inch between the moss and the tops of the pots. The selected spores are sprinkled on the moss, and the succeeding procedure follows orthodox lines. I am assured by Mrs Coles that the method works most satisfactorily with her.

After a few weeks - or in some cases, months - a green tinge will appear on the surface of the compost, and gradually grow until the shape of the tiny green prothalli can be distinguished. These will develop quite quickly to their full size, and it is important to ensure that they do not get at all dry at any time. Keep water constantly in the saucers and in due course minute fronds will appear. Sometimes, in spite of a good healthy crop of prothalli months pass without the appearance of fronds, when fertilisation can often be expedited by flooding the prothalli with tepid water. The sporelings are at first dependent on the prothalli for nourishment until their root systems develop, and when they are about half-an-inch high little clumps of prothalli and ferns are pricked out in other containers under the same conditions of sterility and glass protection, until the young plants are big enough

to tease apart and plant separately. Careful protection must still be given until they are growing strongly, when they can be hardened off and potted on or planted out.

By this time differences will be noted in the cutting of the fronds, some being more finely divided or showing incipient cresting, and these finer specimens must be nurtured carefully for they are the plants we want. Among them may be some first-rate varieties, which will become valuable and cherished additions to the fern collection.

LIST OF FERN NURSERIES

NOEL BROOKFIELD	102 Stamford Road, Birkdale, Southport, Lancashire	HARDY
THOMAS BUTCHER	Wickham Road Nursery, Shirley, Near Croydon, Surrey	MAIDENHAIR
EBFORD NURSERIES	Tupsham, Exeter, Devon	
HAZELDENE NURSERY	Upper Moors Road, Brambridge, Eastleigh, Hampshire	HARDY and GREENHOUSE
HIGHFIELDS NURSERY	Caldecote, Cambridge	HARDY
HIGHLANDS WATER GARDENS	Rickmansworth, Herts	HARDY
HILLIER AND SONS	Winchester, Hampshire	HARDY
W E TH INGWERSEN LTD	Birch Farm Nursery, Gravetye, East Grinstead, Sussex	ALPINE
REGINALD KAYE LTD	Waithman Nurseries, Silverdale, Carnforth, Lancs	HARDY
NEWLAKE GARDENS	New Chapel Road, Crawley, Sussex	HARDY
PERRYS HARDY PLANT FARM	Theobalds Park Road, Crews Hill, Enfield, Middlesex	HARDY
MAURICE PRITCHARD AND SONS LTD	Riverslea Nurseries, Christchurch, Hampshire	HARDY
SUNNINGDALE NURSERIES	Windlesham, Surrey	HARDY

NEW FERN VARIETY FINDS By J W Dyce

At one time, particularly during the last century, finding good fern varieties in the wild seemed to be a commonplace occurrence, but in this day and age they are indeed rare, and a good find is something to shout about. Where better to do the shouting than in the Newsletter, and who better situated than myself, as your Secretary, to collect information about finds and broadcast it to our members. Already many members pass on such information to me, with specimen fronds - and sometimes plants, and I invite all members to let me know whenever they find an unusual fern. Some people, and I hope none of our members are in this category, are selfish and secretive about good plant discoveries, jealously guarding them and refusing to propagate and spread them around for others to enjoy, so that when inevitably the plants - and their owners - die, valuable mutations are lost to us possibly for ever. Good fern finds are deserving of a better fate.

This year a correspondent in Northern Ireland, Mrs Grace Flanagan of Enniskillen, not a member, discovered a very fine Polystichum setiferum 'Acutilobum', and fronds were sent to me for identification. Later I acquired a crown from the plant, and our correspondence led Mrs Flanagan to hunt the area more closely. Two further finds were made, another 'Acutilobum' like the first, and even better a very good 'Divisilobum' the first reported discovery of this variety in the wild since well before the last war. More recently two Athyriums have been found by this lady and fronds sent to me. One is a fair Athyrium filix-femina 'Incisum', but the other is a very outstanding plant with very broad deeply incised and lacerated pinnules. The description and drawing of Moore's 'Diffissum' given in Lowe's 'Our Native Ferns' seems to fit this fern well, and it is another first-rate find for my correspondent who is to be congratulated on making so many good discoveries in such a short time. Our past literature records very little fern-hunting in Ireland except in the Belfast area, and it would appear that the possibilities in Northern Ireland have been very much overlooked. An Excursion to this part of the British Isles could produce very good results for our variety hunters.

Miss Alison Rutherford of Rhu, Dunbartonshire is a dedicated hunter, and this year near her home discovered three very small Hartstongues which seemed different. One plant was collected, and when described to me suggested the variety 'Laceratum'. I immediately advised Miss Rutherford to procure the other two plants, but alas! in the short time that had elapsed they were lost in a small landslide, and

even although the debris was well searched they could not be found. The collected plant, now being looked after most carefully, promises to develop into a very fine specimen of Phyllitis scolopendrium 'Laceratum'. In a nearby wood Miss Rutherford has also found a colony of Dryopteris dilatata containing many large-growing foliose plants. Among them are two or three very good varieties with wide, divided and incised pinnules, one in addition being very crisped. Not many good dilatatas have been found and very few large ones seem to have survived, so these plants can be a welcome addition to our varieties list.

A new member, Mr Eric Chicken of Thwing, East Yorkshire, has found a large-growing Lady Fern in a damp wood. It appeared to him to be abnormal, and from Newman's 'British Ferns' he recognised it as the variety 'Incisum', an identification I was able to confirm. The pinnules are neat, finely cut and distinctive, and the plant is a good find of this variety, inferior forms of which turn up fairly frequently in Athyrium colonies.

Lastly, I was exceedingly fortunate during our weekend meeting in the early summer at Santon Bridge in the Lake District, in making what I consider to be my best-ever find. Mr Reginald Kaye who has an eagle eye for variation in ferns, was with me at the time, and how I managed to beat him to it I shall never know! Under an overhang by a stream a young plant of Polystichum setiferum was growing, its four-inch fronds extremely setose and crisped. Round it were a few other very tiny specimens showing the same characters, so we were all able to share in the discovery. As there seems to be some overlapping of the pinnules and a suggestion of cresting in addition to the other features, we must wait till the plants grow and develop further before we can name them.

This account will show that there are still fern varieties to be found in the wild, and may encourage more members to search for them, but do please let me know about your finds, and propagate and spread them around among fern growers.

EARLY ISSUES OF THE BRITISH FERN GAZETTE

The first five volumes of the British Fern Gazette have now been reprinted by one of the modern photographic processes, and complete sets from Volumes 1 to 9, also separate issues from Volume 1 No 1 onwards to fill gaps in incomplete sets, are available from the Secretary from whom particulars can be obtained. The early volumes deal chiefly with the variations of the British ferns, and are written very

largely by C T Druery, and later by Dr F W Stansfield, both outstanding authorities in this field.

FERN SURVEY OF THE WEALD By A C Jermy

It is proposed that the Society carries out a Group Research Project to study the ferns, lycopods and horsetails of the Weald of Kent and Sussex. Data will be collected, collated and eventually drawn up for publication in the Gazette by Clive Jermy, British Museum (Natural History), Cromwell Road, London S W 7, to whom enquiries or information should be sent.

Four kinds of data are required -

1 Detailed distribution of all species and hybrids in any of the following forms -

a) spot localities of individual populations with grid reference;

b) sketch-maps showing extent of clones, eg of bracken, Dryopteris spp.;

c) frequency of the commoner species in each square kilometer worked.

Workers could be given squares to cover throughout the year. Much information of this kind must be in note-books, manuscript County Floras, Field Club and other Societies records.

2 Fresh or dried (pressed) specimens of the common but variable species, eg Dryopteris filix-mas agg., D. dilatata, Pteridium aquilinum (full list will be sent to participants), should be sent to Clive Jermy from each population or clone.

3 Ecological data from any fern site is needed - soil (content, texture, moisture); climatic (rainfall, shade/light, humidity, etc); phytosociological (ie associated plants, including mosses and liverworts) data will be welcomed.

4 Data observed on the general biology of a species in one site over a period of years is badly needed, eg longevity of Azolla populations in a pond, frequency in all species of sporing, germination and establishment of sporophytes from gametophytes, and records of young plants especially of bracken.

Anyone interested and/or willing to help should contact Clive Jermy for data sheets and further information. The Ashdown Forest meeting next year (1969) will begin the collecting of data for this Project, when members and others wishing to assist but uncertain how to proceed, can be initiated into and become familiarised with the methods to be employed. For this reason we hope there will be a good turnout at this meeting.

SPORE AND PLANT EXCHANGE

Members wishing to exchange spores and plants will find the Newsletter a useful medium for the purpose, and all offers and requests will be published in the issue following their receipt. Subsequent correspondence must be between the interested parties direct and not routed through the Secretary.

The American Fern Society Spore Exchange requires spores of all kinds, and their list of those available can be obtained from the Organiser, Mr Neill D Hall, 1225 NE 95th Street, Seattle 15, Washington, U S A.

The University of Hull Botanic Garden issues a list of seeds and spores offered for exchange, obtainable from the Assistant Curator, Mrs J K Marston, Botanic Garden, Dept of Botany, The University, Hull, Yorks.

The following overseas members are interested in exchanging spores -

Mrs E S Bayley, Danbury Park, Postbox 21 MR, Marlborough, Salisbury, Rhodesia.

Mr G Kunkel, Camino Viejo 9, Tapira Alta, Las Palmas de Gran Canaria, Canary Islands.

Mrs Sylvia Leatherman, of the Los Angeles International Fern Society, 2637 North Lee Avenue, South el Monte, California 91733, USA.

Miss K H Stocker, Mapua, New Zealand.

Mrs G E Tierney, 593 Buchanan Street, Hillside, New Jersey 07205, USA.

READING CIRCLE

For the information of our newer members, we have a Reading Circle which circulates the American Fern Journal among those interested. This is issued quarterly and contains much valuable information for those seriously interested in ferns. Please advise the Secretary who will add your name to the list.

BOOK REVIEW By J W Dyce

'The Lazy Gardener's Guide' by Geoffrey Gilbert, 220 pages, Hamish Hamilton, London, 1968. Price 21 shillings.

This book is typically Geoffrey Gilbert, one of our active members, and a delightful companion in the field - and in the garden - with a seemingly lazy and casual manner which belies his energy of mind and body. The book is thought-provoking - the title alone is that and makes one want to pick it up and open it - and although he may consider himself a lazy gardener, which a visit to his garden will disprove, his thinking and searching mind is far from lazy and probes deeply. Its findings, however, are down to earth in their simplicity, a quality which will endear the book to the ordinary gardener.

As the publishers state, the book 'tells how to get the greatest pleasure from a plot of ground with the minimum amount of effort, and is substantially a guide to garden enjoyment', and this sums it up excellently. As an artist, the Author has his ideas on garden layout and elaborates them. He tells us how to plant it, combinations of plants to employ, labour-saving plants to use, lazy methods of weeding and cultivation, and all in that languid style which seems to suggest that it can all be done from the comfort of your armchair. And that is how to read this delightfully restful book - keep it by your armchair so that it can be picked up and enjoyed whenever you wish to relax after a 'lazy' spell in the garden.

GARDENS TO VISIT

The Gardeners' Sunday Organisation publish annually a booklet listing the gardens which are opened to the public in aid of the Gardeners' Royal Benevolent Society and the Royal Gardeners' Orphan Fund, and may be visited during the year from March to October. This booklet entitled 'Gardens to Visit' can be obtained through W H Smith's or Wymans bookstalls at 1/-, or direct from the Organiser, Mrs K Collett, White Witches, Claygate Road, Dorking, Surrey, for 1/4d including postage. For those who, during their wanderings throughout the country, enjoy visiting gardens, while at the same time supporting a worthy cause, this comprehensive booklet will prove invaluable.

SLIDE LIBRARY

The Society is endeavouring to build up a Slide Library, and members are invited to send slides, either in colour or black and white, to Mr R F Cartwright, 143 Pittmans Field, Harlow, Essex, accompanied by some relevant information about them.

CERTIFICATE IN FIELD BIOLOGY

We are asked by the University of London, Department of Extra-Mural Studies to draw attention to their Certificate in Field Biology which is open to persons interested in the study of living things in their natural habitats. The work involves a directed course of private reading at home, attendance at two Practical Courses each of two weeks held in the summer of consecutive years, an approved plan of field work suited to the student's locality to be written up in the form of a Special Study, and examinations.

The Certificate is designed for teachers and others requiring such a certificate in connection with their work or studies. Full particulars, syllabus and registration forms can be obtained from the Assistant Director, Department of Extra-Mural Studies, University of London, 7 Ridgmount Street, London W C 1.

SCOTTISH FIELD STUDIES ASSOCIATION

The Association has a comprehensive Programme of Courses arranged for 1969 at the Kindrogan Field Centre near Blairgowrie, and at other Centres, extending from March to November. These offer excellent opportunities to study the natural history of the Scottish Highlands. Address enquiries and applications to The Warden, Kindrogan Field Centre, Enochdhu, Blairgowrie, Perthshire.

NEW MEMBERS AND SUBSCRIBERS

AKRON UNIVERSITY, The Library, Akron, Ohio 44304, USA.
BOUHARMONT Dr J, Institut Carnoy, 24 Rue du Canal, Louvain, Belgium.
CASTLE-SMITH Mrs Jean, 22 South Erskine Park, Bearsden, Glasgow.
CHAPMAN Miss Anne, 28 Braemar Avenue, Wimbledon Park, London S W 19.
CHICKEN Eric, Main Street, Thwing, Driffield, East Yorks.
COLES Mrs Elizabeth, 18 South Hill Drive, Gilstead, Bingley, Yorks.
DAIGOBO Sigeru, Botanical Institute, Faculty of Science, Tokyo University of Education, Otsuka, Bunkyo-ku, Tokyo 112, Japan.
ELICKER Mrs Marie, 2224 Shelby Street, New Albany, Indiana 47150, USA.
EVANS Dr A Murray, Department of Botany, University of Tennessee, Knoxville, Tenn. 37916, USA.
FINCH Dr R A, 175 Harold Road, Hastings, Sussex.
GASTONY Gerald J, Gray Herbarium, Harvard University, 22 Divinity Avenue, Cambridge, Mass. 02138, USA.
HALL H S Hemsley, 8 Orchard Drive, Little Comberton, Near Pershore, Worcs.
HOPTON B, BA, 47 Himley Crescent, Goldthorn Park, Wolverhampton, Staffs.
HORNE Roger C H, Crutches Dell, Jordans, Bucks.
IWATSUKI Dr K, Department of Botany, Faculty of Science, Kyoto University, Kyoto, Japan.
KANAMORI Keisuke, Botanical Institute, Faculty of Science, Tokyo University of Education, Otsuka, Bunkyo-ku, Tokyo 112, Japan.
KAWAKAMI Syohgo, Botanical Institute, Faculty of Science, Hiroshima University, Higashi senda-machi, Hiroshima 730, Japan.
KAWASAKI Dr Tsugio, Biological Institute, Tokyo University of Liberal Arts, Koganei, Tokyo, Japan.
LIBRARY OF CONGRESS, Order Division, Washington DC 20540, USA.
MACHIN Clifford, Bay Ridge, 43 Manor Road, Bramhall, Cheshire.
MAKIN B, 64 Abbey Avenue, Alperton, Wembley, Middlesex.
MITUI Dr Kunio, Botanical Institute, Faculty of Science, Tokyo University of Education, Otsuka, Bunkyo-ku, Tokyo 112, Japan.
OWEN Miss Teresa, 30 Orchard Road, Whitby, Ellesmere Port, Cheshire.
PUNTER A W, Highfield, Boswell Lane, Hadleigh, Ipswich, Suffolk.
SCHOLLICK H L, Malthouse, 96 Church Way, Iffley, Oxford.
SHARP W G, Rydal, The Green, Gt Bentley, Colchester, Essex.
SOMMERVILLE Mrs A H, MA BSc, Department of Botany, Aberdeen University, St Machar Drive, Old Aberdeen.
STOCKER Miss Kate H, Mapua, New Zealand.
TAKEI Masahiro, Botanical Institute, Faculty of Science, Hiroshima University, Higashi senda-machi, Hiroshima 730, Japan.
WALPOLE Robert B, Mount Usher, Ashford, Co Wicklow, Eire.

WHITE Miss Barbara, 10 St Barnabas Road, Emmer Green, Caversham, Reading, Berks.
WORLAND M R, 5 Fen Road, Cambridge.
YEOMAN Miss Ruth, 37 North End, Osmotherley, Northallerton, Yorks.
YOROI Miss Reiko, Botanical Institute, Faculty of Science, Tokyo University of Education, Otsuka, Bunkyo-ku, Tokyo 112, Japan.

OBITUARIES

It is with regret that we announce the deaths of the following members -

T W Drury of Fulwood, Preston, Lancs, who died in December 1967. He had been a member for only two years.

G P Hopkins of Kinsley Gardens, Bournemouth, who died in January 1968, after a membership of only a few months.

R D Trotter of Flichity, Inverness, joined the Society about 1927, but was never an active member. In the inter-war years he was a director of the National Provincial Bank, and later Chairman of the Alliance Assurance Company. He joined the Council of the Royal Horticultural Society in 1928 and was its Treasurer for many years. He was a keen plantsman till his death at the age of 80 in the summer of 1968.

WANTED

Back issues of the British Fern Gazette and old fern books

Members with old Gazettes or fern books for which they have no further use, are invited to present them or sell them to the Society. There is always a demand for old fern books from new members, and if you are considering disposing of yours please give us the opportunity to acquire them.

THE BRITISH PTERIDOLOGICAL SOCIETY

MEETINGS PROGRAMME FOR 1969

Saturday 22 February	Indoor Meeting at the British Museum (Natural History), Cromwell Road, London S W 7 at 3 pm. Dr Stanley Walker from Liverpool University will talk on his work on the North American Wood Ferns (Dryopteris spp.) followed by a buffet meal and informal evening meeting.
Saturday 10 May	Visit to the Fern Houses at Kew Botanic Gardens. Meet at 2 30 pm outside the Fern Houses.
Friday/ Sunday 30 May/ 1 June	Weekend Meeting in Dorset. Leader - R F Cartwright. Centre - Estyard House Hotel, Fontmell Magna, near Shaftesbury. Tel: Fontmell Magna 460.
Saturday 7 June	Visit to Mr H L Schollick's garden at Iffley, Oxford at 2 30 pm. This will be preceded by a visit to the Oxford Botanic Gardens. Meet at the main entrance at 11 am. Bring packed lunches.
Friday/ Sunday 13/15 June	Weekend Meeting in South Wales. Leaders - A E Wade and S G Harrison. Centre and details not yet arranged - see NOTES
Saturday/ Saturday 21/28 June	Week Meeting on the Isle of Arran. Leader - Mrs A H Sommerville. Centre - Invercloy Hotel, Brodick. Tel: Brodick 25. Members able to come for only part of the week will be welcomed. NOTE - Arran is a <u>very</u> popular holiday resort, and it is essential that early booking be made for accommodation, and for transport of cars on the ferry. Ask the Meetings Secretary as soon as possible for necessary detailed information.
Friday/ Sunday 11/13 July	Weekend Meeting on Cambridge/Suffolk border. Leaders - A J Worland and M H Rickard. Centre and details not yet arranged - see NOTES We hope to continue botanising in Norfolk during the following week for those interested in extending the weekend. Members staying on may wish to join the Dovedale Meeting (see next Meeting) before returning home.

Friday/ Sunday 18/20 July	Weekend Meeting in Dovedale. Leader - R Woolley. Centre and details not yet arranged - see NOTES
Friday/ Sunday 18/20 July	Weekend Meeting in South Scotland. Leader - Dr James Davidson. Centre and details not yet arranged - see NOTES
Friday/ Sunday 25/27 July	Weekend Meeting in Ashdown Forest, Sussex. Leader - A C Jermy. Centre and details not yet arranged - see NOTES See also Page 21 'Fern Survey of the Weald'.
Friday/ Sunday 1/3 August	Weekend Meeting in Borrowdale, Cumberland. Leader - Fred Jackson. Centre and details not yet arranged - see NOTES
Friday/ Sunday 8/10 August	Weekend Meeting in Gareloch/Loch Long area in West Scotland. Leader - Miss A W Rutherford. Centre and details not yet arranged - see NOTES
Friday/ Sunday 15/17 Aug	Weekend Meeting in North Wales. Leader- W Elfyn Hughes. Centre and details not yet arranged - see NOTES
Wednesday/ Friday 27/29 Aug	Southport Flower Show. Many fern classes showing a fine selection of the best varieties. We have a Stand in the Specialist Societies Tent. Come and see us when visiting the Show.
Saturday/ Saturday 30 August/ 6 September	Annual Excursion to North Cornwall. Leader - J W Dyce. Centre - Eagle House Hotel, Launceston. Tel: Launceston 2036
Wednesday 3 September	The Annual General Meeting, to be held during the Annual Excursion, at Launceston at 8 pm. Further information and Agenda will be sent before the Meeting.
Friday/ Sunday 19/21 September	Weekend Meeting at Bromyard, Herefordshire. Leader - C H Fisher. Centre - Hop Pole Hotel, Bromyard. Tel: Bromyard 2149 & 3354
Saturday 8 November	Indoor Meeting at the British Museum (Natural History), Cromwell Road, London S W 7 at 3 pm. Talks, discussions and conversazione continuing into the evening. Buffet meal provided.

WILL ALL MEMBERS ATTENDING ANY OF THE FIELD MEETINGS PLEASE READ THE FOLLOWING NOTES, ALSO THOSE ON THE MEETINGS FORM

NOTE 1 — With the exception of the Annual General Meeting, further necessary information regarding the meetings will be advised only to members who complete and return the Meetings Form (attached) to the Meetings Secretary.

NOTE 2 — Members must make their own accommodation arrangements, but we hope to be able to supply some information concerning available accommodation, ie hotel, boarding house, farmhouse and bed and breakfast addresses, in the areas for most of the meetings. APPLY TO THE MEETINGS SECRETARY.

NOTE 3 — Weekend meetings commence on the Friday evening to allow an early start to be made on the following morning. Members unable to arrive on the Friday evening and wishing to join the Saturday and/or Sunday meetings, should advise the Meetings Secretary or the Leader beforehand, and should be at the meeting place before 9 30 am. While every endeavour will be made to do so, we cannot guarantee to leave sufficiently explicit directions to enable late-comers to follow on and make contact.

NOTE 4 — Private car transport will be used except for the meeting on 10 May. Please mark the Meetings Form accordingly.
PLEASE NOTE - special provisions apply to our transport arrangements on Arran and the necessary information will be supplied by the Meetings Secretary.

PLEASE COMPLETE AND RETURN AS SOON AS POSSIBLE

To: Mr R F Cartwright, 143 Pittmans Field, Harlow, Essex.

I hope to attend the meetings marked 'X' below. Please keep me informed.

(BEFORE FILLING IN THE FORM PLEASE READ THE NOTES BELOW AND ALSO THOSE APPENDED TO THE MEETINGS PROGRAMME.)

NOTES FOR PASSENGERS -

Lifts cannot be guaranteed to and from venues.
You will be advised of car-owners, if any, living near you, and all enquiries must be made direct, enclosing STAMPED ADDRESSED ENVELOPES for replies.

You are expected to share expenses with car-owners.

Mark 'X'		
	1	Fern Houses, Kew 10 May
	2	Dorset 30 May/1 June
	3	Mr Schollick 7 June
	4	South Wales 13/15 June
	5	Isle of Arran 21/28 June
	6	Cambridge/Suffolk 11/13 July
	7	Dovedale 18/20 July
	8	South Scotland 18/20 July
	9	Ashdown Forest 25/27 July
	10	Borrowdale 1/3 August
	11	Gareloch/Loch Long 8/10 August
	12	North Wales 15/17 August
	13	North Cornwall 30 Aug/6 Sept
	14	Herefordshire 19/21 Sept

Members with cars		Members without cars	
No. of spare seats available for passengers to and from venues	No. of spare seats available for passengers during meetings	Making own travel arrangements	Would like lift to and from venues

NAME .....

ADDRESS .....

.....

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THE BRITISH PTERIDOLOGICAL SOCIETY

NEWSLETTER

No. 7

NOVEMBER, 1969

MISSOURI BOTANICAL
JAN 2 - 1970
GARDEN LIBRARY

Secretary

J. W. DYCE, 46 SEDLEY RISE, LOUGHTON, ESSEX.

NEWSLETTER No 7 NOVEMBER 1969

EDITED by
The Secretary J W Dyce

EDITORIAL

Many members have told me how much they enjoy the Newsletter and assure me that it is becoming the non-botanists' "Gazette". This is what it is intended to be, and it is very satisfactory to know it is achieving its purpose. A few criticisms have reached me, however, expressing dissatisfaction that the British Fern Gazette is so completely botanical. These critics would again like to see in the Gazette papers for the grower and collector of varieties, and obviously the development of the Newsletter is not enough for them. However much I can sympathise with their nostalgia for the old Society and the old Gazette, like King Canute we cannot stop the tide. It is the introduction of the botany of ferns and the botanist into our Society which has brought it back - literally - from the dead, and made it the strong and steadily growing association it is today, regarded worldwide by reason of the Gazette, as one of the leading organisations on matters pertaining to ferns. These plants are becoming more and more important in botanical research, and we can be proud that we are in the forefront of this research through our close links with today's world leaders in fern botany.

To our critics I would repeat once again that we are in effect two societies, complementary to each other, but pursuing different courses. The Gazette as our botanical publication has achieved great success - leave it that way, and let us develop this Newsletter to become equally great in the world of collectors, growers and fern lovers. It is still in its infancy but growing fast, and already I find it is being asked for outside the Society. It may have a humble format and I doubt if we shall ever be in a position to produce it by any more expensive means, but it is the contents which matter. Members can help me to produce a good sound publication with a wide coverage of fern matters, and I shall welcome your contributions.

SUBSCRIPTIONS were due on 1 July - don't forget yours !

THE ANNUAL GENERAL MEETING

We held the Meeting on the 3rd September at the Annual Excursion centre, the Eagle House Hotel, Launceston, in Cornwall. The Secretary reviewed the year and reported that the Society continues to grow in numbers and is becoming more active. Our membership is now approaching the 350 mark and many of the newer members have attended our many outdoor meetings. This first year of our enlarged programme has made it evident that there is strong interest in our field work, and this has made the extra labour involved very much worthwhile. In the different areas we have visited we invited local members, where possible, to act as leaders, and the amount of planning and preparation which they put into the job has been a tremendous help, and very much appreciated. The success of these meetings will, no doubt, do much to attract more new members into the Society.

This year we took part in the Tenth Anniversary celebrations of the National Association of Flower Arranging Societies of Great Britain. A magnificent exhibition of flowers was staged in St Paul's Cathedral in London, and also in the Royal Horticultural Society's halls in Westminster where competitions were also held. Flower arrangers are beginning to appreciate more the value of ferns in their arrangements, and our Society exhibit will, we hope, inspire more of them to do this and to grow the plants, which may eventually lead them to join us.

Our Editor-in-chief, Mr Clive Jermy, left for the Far East at the end of August on a fern collecting expedition, sponsored by the British Museum (Natural History). He is at present in Indonesia, and goes on to New Guinea in the New Year, returning home at the end of March. We wish him good hunting.

Dr James Davidson's three year term as President of the Society expired this year. He reverts to the rank of Vice-President and we thank him warmly for his services to the Society during his tenure of office. We are very pleased to welcome our new President, Professor Irene Manton, a fern botanist of international renown, and recently retired from the Chair of Botany at Leeds University. Our other officers continue unchanged. The retiring members of the Committee are Messrs R F Cartwright and R S W Pollard who have our appreciative thanks for much hard work on our behalf, and we cannot allow this opportunity to pass without making special mention of Mr Pollard's very valuable professional guidance and help in the drawing up of our new constitution some years ago. Mr Cartwright remains on the Committee by virtue of his office as Meetings Secretary. We welcome on to the Committee Mr H L Schollick and Dr Anne Sleep. Mr Schollick,

FINANCIAL STATEMENT AS AT 30TH JUNE 1969

ORDINARY ACCOUNT

1967/8	1968			£			1967/8			£		
£ 171	30 June	To	Balance	101	9	3	£	By	Payment to Devonshire Press Ltd cost			
313			Subscriptions	376	19	-	312		Gazette Vol 10 pt 2	352	18	7
8			Donations	5	8	-			Payment to Merchant			
38			" Publications Fund	-	-	-			Printers cost re-printing Gazettes			
			Sales - £				-		Vols 1-5	398	3	6
76			Gazettes & Newsletters 377 1 8						Payment Metloc			
-			Census Lists 1 2 -						Secretarial Services -			
-			Plants 7 6	378	11	2			cost duplicating			
			Charges for				31		Newsletter No 6	34	4	-
-			distributing leaflets	6	6	-			Bulk purchase Duplicating Paper for			
			Prepayment part cost plates in Gazette				-		Newsletter	50	-	-
-			V.10-2	4	7	3			Subscriptions - £			
			Interest on Deposit						Council for			
13			account	10	2	5	5		Nature 5 1 -			
			Transfer from Reprinting fund o/a cost reprinting old				3		Royal Hort. Society 3 3 -	8	4	-
-			Gazettes	21	-	-	36		Printing & Stationery	20	5	-
									Secretarial and			
			Debit Balance at				31		Editorial Postages	38	17	-
			30th June 1969	9	16	6			Costs of Indoor			
							-		Meetings	11	7	6
				£ 913	19	7				£ 913	19	7

1969			
30 June	By	Balance	£ 9 16 6

REPRINTING FUND

		£			£
1968			1969		
30 June	To Balance	375 - -	30 June	By Transfer to Ordinary A/c	21 - -
				BALANCE AT 30 JUNE 1969	354 - -
		£ 375 - -			£ 375 - -
1969					
30 June	To Balance	£ 354 - -			

PUBLICATIONS FUND

1968			1969		
30 June	To Balance	£ 38 - -	30 June	By BALANCE AT 30 JUNE 1969	£ 38 - -
1969					
30 June	To Balance	£ 38 - -			

as a publisher, will be most useful in our councils, since publishing seems to occupy a lot of our thinking these days. Dr Sleep, a former student of Professor Manton, has just returned from Japan to take up a post at Leeds University, and we look forward to the renewal of her former active participation in our affairs.

Since the end of our financial year in June we have had a further Grant-in-aid of £250 from the Royal Society to assist with the publication costs of the British Fern Gazette. The first two parts of Volume 10 are excellent productions, but their high standard has necessitated the expenditure of all our available funds. In last year's Financial Statement I showed an estimated cost of £270 for Part 1 but the actual figure was £42 more, reducing our final balance to about £100. This has been completely swallowed up by the cost of Part 2, leaving us with a deficit of about £10, and we are indeed grateful to the Royal Society for again coming to our assistance.

Our reprinting programme has been very successful, and we have been able to meet the cost of the operation from the sales of the reprinted early volumes of the Gazette, leaving our Special Funds almost untouched, and available for eventual use towards the cost of the booklets we plan to publish in the future.

THE CONSTITUTION - An Interpretation

At the Annual Excursion in Cornwall there was a strong feeling among many of the members present that Rule 2 of our Constitution should be brought more emphatically to the notice of the membership, to stress the need for conservation, and restraint when collecting ferns in the wild. An interpretation of the Rule was needed to make it quite clear, and accordingly the following Resolution and Interpretation were presented to the Annual General Meeting and accepted, with an instruction to the Secretary that they should be brought to the notice of all members.

"This Society affirms its Object, stated in Rule 2 of the Constitution, of promoting and encouraging the conservation of Ferns and other Pteridophytes. In support of this it commends to its members the following principles to be observed in collecting plants for cultivation -

1 Ferns and fern allies should only be collected from well-established colonies of sufficient size, and the colony should not thereby be significantly diminished.
2 The abundance of the particular species in the region should also be considered, and rare species should only be collected where they are locally abundant, if at all.

3 No one should collect more than they really need, or species which they are unlikely to be able to grow.

In gathering complete plants for herbarium specimens the same principles should be followed, and otherwise only fronds should be taken, if required for record purposes."

Our Society values its good name, and members are asked to read carefully and observe the above principles conscientiously, so that nothing is done which will bring us into disrepute.

MEETINGS

Our Meetings Programme has been greatly enlarged by increasing the number of weekend meetings to 10, and by the addition of a second excursion lasting a week. Some of us visited the Isle of Arran in 1968 with the main object of trying to re-establish the existence of the Killarney Fern, Trichomanes speciosum, on the Island. There are many old records of it being found in several places, although whether originally introduced or not, we cannot say. We did not find the fern, but the area seemed so suitable for it and also provided such rewarding hunting that a second visit was planned as an extra Society excursion this year. We had an excellent attendance of members and, although again the Killarney Fern quest was a fruitless one, we established the fact that Arran is one of the most fern-rich parts of Britain, ranking with Snowdonia in the number of species to be found. The Autumn Excursion was held in Cornwall, and again we were most successful, with many more fern species and allies found than ever before on West Country Excursions. Although Devon, Dorset and Somerset constitute a region with one of the richest fern floras in the country, it can produce only about 20 species, whereas during this first meeting in Cornwall we found 27 ferns and 6 allies, many of them rare or uncommon.

The weekend meetings gave a good coverage of the whole country, and fully justified the amount of work involved in organising them. For the first time we have used local members as leaders and organisers, and this has proved so satisfactory that the system is being adopted for all future meetings, wherever possible. The two Scottish ones were not successful - one was not held at all, and the other attracted only myself in addition to the two leaders - while south of the Border, at the only poorly attended meeting even the local leader failed to turn up ! Members attending the others varied from about 6 to 10. I was present at all but one, a feat I cannot promise to repeat in future years since the expenditure of time and money was rather considerable - our Society has not yet reached the affluent

state of being able to meet the expenses of a travelling representative !

The main objects of the meetings were (a) to get more members interested in the active life of the Society, and this was achieved, for I was able to increase greatly the number of members with whom I am personally acquainted, to me a most satisfactory aspect, and (b) the wider exploration of the countryside to build up fuller distribution records, and also to search for fern variations. Many new records have been made for both ferns and allies, and we have also had some success in the finding of varieties.

A popular afternoon outing is our annual visit to the Fern Houses at Kew. More and more members are attending and this year we numbered 26. As well as being able to see the magnificent fern collections which Mr Bruty looks after so well, this occasion, like our indoor meetings, provides a splendid opportunity for an informal reunion of members. Two indoor meetings were held from 3 pm onwards, both well attended and obviously enjoyed by the large numbers present, and it was after 8 pm before everyone had departed. At the February meeting Dr Stanley Walker from Liverpool University gave a most informative talk on the North American Dryopteris species, and at the November one Mr Peter Chapman talked on fern photography, Dr Kunio Iwatsuki on the Filmy Ferns, and Mr Francis Tingey on the year's field meetings illustrated by colour slides. One day meeting was held, when on a perfect June day we paid a visit to the Oxford Botanic Garden, and later to the lovely garden of Mr Henry Schollick with its many ferns and other things of interest. A good sized party was most hospitably entertained by Mr and Mrs Schollick.

Next year's Programme at the back of this Newsletter is equally comprehensive, and we invite <u>more</u> of our members to come along to some of the many meetings - we can promise you an interesting time. I want to mention, in particular, the excursion to the Isle of Mull on the west coast of Scotland. This Island has not yet been explored for ferns and has much to offer us in a large variety of habitats, mountain, woodland and seaside, as well as magnificent scenery.

SLIDE LIBRARY

The Society is endeavouring to build up a Slide Library, and members are invited to send slides, either in colour or black and white, to Mr R F Cartwright, 143 Pittmans Field, Harlow, Essex, accompanied by some relevant information about them. Most 35mm photographers play safe by taking duplicate shots - please send your unwanted spares to us.

FERN SHOWS

As usual there was a very fine entry in the many fern classes at Southport Flower Show, and I would again mention for the benefit of new members that this is THE place to go if you wish to see a comprehensive collection of some of the best varieties, well grown and displayed to best advantage. Many people including several of our members visited us at our Stand in the Specialist Societies Tent, where we always welcome anyone interested in ferns. Messrs Brookfield, Hayhurst, Robinson and myself were in attendance.

One other show deserves our very favourable comment. At the Helensburgh Dunbartonshire Flower Show, held at the same time as the Southport one, our local member, Miss Alison Rutherford, set up a magnificent fern display to advertise the Society. Sketches of the layout sent to me by Miss Rutherford show a very skilfully planned exhibit which must have attracted a great deal of attention, and it is obvious that she has great talent for this kind of work. If only we had her down in the south we would have no difficulty in putting up fern exhibits of the highest standard at the Royal Horticultural Society shows, resulting in great benefit to the Society - come south, Alison ! We compliment Miss Rutherford on her superb display, achieved by her own efforts with no assistance, and thank her for her splendid work on our behalf.

NEW FERN VARIETY FINDS By J W Dyce

Good fern varieties continue to be found in increasing numbers in the wild, or is it that I am being better informed than I have been in the past ? From the fact that I only found out about some of them because my extensive travelling to meetings this year led me to meet the finders and see the plants or fronds for myself, I am inclined to assume that others of which I know nothing have probably been found, and I would again appeal to all our fern hunters to let me know when they find something good, so that it can be put on record.

Information on one first-rate find reached me just too late for inclusion in the last issue, but it has lost nothing of its value in the meantime, although the plant was very nearly lost through no fault of the owner. The fern is a fine specimen of Blechnum spicant "Ramosum", of the same quality as the one depicted in colour in Druery's "British Ferns and their Varieties". It was found on Harris in the Western Isles by Miss Delia Castle-Smith, the daughter of our member, Mrs Jean Castle-Smith, and she is to be congratulated on an excellent find. At present the plant is

in the hands of a nursery friend for safe-keeping, is now growing well and has been divided into two. In a year or two it is hoped to spread it around.

This summer I helped Mrs Castle-Smith to collect one of her finds - a huge specimen of Athyrium filix-femina "Inciso-cristata", consisting of three large crowns with fronds almost 6 feet in length. It was a herculean task to climb up half a mile of steep rough hillside with it on a hot summer's day, but well worth the labour involved. Crested Lady Ferns are almost a commonplace in the wild, but this one with deeply incised pinnules and very shapely cresting is a most acceptable garden plant.

During our weekend visit to North Wales we were able to see some plants and fronds collected by Mr William Elfyn Hughes, who lives in Bangor and knows the ferns of Snowdonia well. Although his interests are botanical, he has a keen eye for variations and surprised us greatly with the many good plants he has found in the area, particularly of Polypodium vulgare. In his herbarium is a wide range of fronds from very broad specimens, deeply serrated ones, and some very good "Semi-lacerums". The best of the last named were collected, as well as an excellent Polystichum setiferum "Divisilobum", superior to the one collected by Mrs Flanagan in Ireland last year, and only the second recorded plant of this variety since the war. Mr Elfyn Hughes has also found two colonies of Polypodium vulgare "Cambricum" in the region, but is not divulging the localities to anyone - a very wise precaution, for with so much of this variation already in cultivation there is no point in denuding the wild of these plants, and someone would be sure to covet them.

While we were on the Annual Excursion to Cornwall in September, Mr Peter Corbin showed us a frond from one of his finds in his home district around Tavistock. This was a very fine Phyllitis scolopendrium "Sagittato-crispum", deeply frilled with well-shaped basal lobes, and like all true crispums, quite barren.

I was again lucky enough this year to make another Polystichum find - a good strong-growing proliferous plant of P setiferum "Acutilobum". It was found on a steep wooded slope near Bromyard in Herefordshire, almost at the end of our weekend meeting there, and made an excellent finish to the weekend, and to the field meetings for the year.

Minor varieties have been found by other members, and Mr Hugh Corley has sent me several fronds, collected in Scotland, of P lonchitis and dwarf P aculeatum plants which have been "doing things". Mr Bryan Makin too has found good crested forms of Dryopteris borreri and A filix-femina.

I shall finish with some further information about the young P setiferum with setose and crisped fronds which I found in the Lake District last year. The characters are now better developed, and seem to be identical with those of my plants of P setiferum "Foliosum Grande Walton", a beautiful variety raised about 1919 from spores supplied to Mr Walton by Joseph Wiper of Kendal. The spores were thought to have come from another raised plant, P setiferum "Crispato-foliosum Parsons", and it is most interesting to find this variation, until now unique, recurring in the wild on the opposite side of the Lake District, in the Broughton-in-Furness area. One wonders what the parent is like, and if it is distinctive enough to be found on a return visit to the vicinity.

HELP TO RARE FERNS By G Gilbert

As a boy I discovered three quite distinctive plants in an area of untended woodland in the Midlands. These were Asarum europaeum, Genista tinctoria and Paris quadrifolia. This summer I made a careful search of the neighbourhood and satisfied myself that not a single specimen survives.

This is an experience which happens to all of us and always produces a feeling of sadness. Looking for scapegoats, we automatically think of the urban motorists with their picnic baskets and transistors. They do considerable damage, but I do not think they are the sole culprits. Certainly it is difficult to imagine the average motorist struggling through a damp muddy wood, merely to collect a basketful of Asarum europaeum. In the case quoted, my unfortunate discovery led to the school botanical group visiting the wood, and other grammar schools followed.

This brings me to a point about which I always feel uneasiness. Can we honestly say as a society, that any area was richer in ferns after our visit ? By however little, the reverse has always been true. I also note that not all nature lovers have our standards. In Kew Gardens I am told that rare specimens quite unlikely to interest uninformed persons constantly disappear. What happens when such "nature lovers" find a colony of Woodsia on a lonely mountain ? Thus while motorists raid bluebell woods, rare and inconspicuous plants also recede from the land. None of us is entirely blameless, and our very existence, our need for goods, water, electricity etc, is a menace to the plants we love. I myself have admitted to causing the extinction of three interesting plants from a neighbourhood where they are never likely to be seen again. Is it then unreasonable to suggest that we might make some small amend for damage done, however inadvertently, and help as well as hinder ?

I know many botanists feel that it would be almost morally wrong to interfere with nature, with the natural recession of interesting plants from these islands. There are many arguments. To plant artificially would destroy the joy of a find, and that in any case, there will never be a shortage of rare plants, for as one becomes extinct, another will become rare to take its place. If Victorian botanists had planted as they collected, we should not know if a seed arrived at a site accidentally on the boot of the botanist, and is native, or if it was carried in his Gladstone bag and is therefore alien to the neighbourhood.

But let us think about this another way. The botanical history of these islands as a temperate zone is quite brief, not even greatly exceeding recorded history. After the last ice age plants began to drift in, but so did men. Early men are known to have been migratory in their habits, and though their voyages did not compare with those of birds, they carried more baggage and consequently were more likely to carry seeds to new sites. Sitting in some ancient oak wood one may reasonably wonder if the first acorn came in the mouth of a dove or as the plaything of a Palaeolithic child. This child may even have planted the acorn.

The drift of plants from the continent has been going on for thousands of years and certainly cannot have stopped. We ourselves are aiding this process, albeit accidentally. Unfortunately, this accidental assistance seems seldom to work advantageously and scarcely a decade goes by without the introduction and dispersal of some new seed. Since we cannot apparently avoid introducing and spreading plants, let us at least do some of this work in a thoughtful and useful manner.

Certainly it is difficult to see any realistic argument against the limited objectives of finding new sites for rare plants, particularly ferns, and more especially those likely to become extinct. This would involve spreading them about in districts where they already exist, in order to form a broader basis for survival and also introducing them to new districts, where they are considered to have a good chance of survival. These new colonies might appropriately be on National Trust property and would not only make the continued existence of rare ferns more secure, but also add to our knowledge of them. The argument usually raised against this concept is perhaps best expressed in the following quotation: "We have good reason to believe that in the case of wind blown seeds and spores, all available sites have already been occupied by a colony of plants." I have heard this idea expressed many times but it has always appeared to me to be absolute nonsense, since it omits the

time scale. Let us consider a practical example. Eight years ago in this garden I planted a root of Cystopteris fragilis. It established easily and new plants appeared from spores, so that there are now about twenty specimens. Here, then, is a suitable site which would eventually have been occupied by the fern. This no one could reasonably doubt, but let us try to calculate when this would be likely to happen.

Handled in an approximate way, the calculation is not difficult. We know roughly the number of spores produced by the ferns in the garden and the number that have developed into plants. Presumably the same proportion would be maintained if the spores came from outside. We also know that a hundred odd miles away there are large colonies of the fern. Let us suggest that there are a million ferns in these colonies and that each fern contrives to get a thousand spores airborne each season. The fern does not live in exposed places and always in wet areas, so that, as this figure suggests, not many spores would be likely to get well away. Spores from this airborne fleet would dot the ground with decreasing frequency as their journey progressed, since their numbers would diminish and the area of ground lying beneath them increase. Let us suppose the distance between falling spores would double for every mile travelled.

On these crude figures we can base a calculation which though not accurate should indicate the order of magnitude into which the final result would fall. If you have a scrap of paper by you and you care to check my calculation, I think you will find, according to these figures, that it is mathematically certain that a Cystopteris will establish itself in my garden once every 100,000,000 years, on average. Of course, this mathematical certainty depends on the status quo being maintained and myself remaining in charge of the garden during this extended period of time. Statistically, this appears unlikely, and in any case I sometimes consider changing my method of gardening.

In fact, it is extremely unlikely that, without my interference, Cystopteris would have invaded my garden before some kind of change had overtaken the area. It would still appear unlikely if my calculation was out by a thousand times or even a hundred thousand times, and it is almost certainly far too optimistic.

This must be true of all isolated sites - they change before the expected invasion can take place - and even in broad areas with suitable conditions the rarer ferns only grow in microclimates, whose characteristics we are seldom able to define. The number of these sites occupied will obviously depend on the ratio between the rate of change and the spore

distribution. Probably there is enormous planting potential. The number of factors that might alter the suitability of a site for the reception and growth of a prothallus is quite incalculable. A transplant is rather a different matter and immediately affects the spore concentration, increasing it by millions of times in areas near to the plant. The rate of change also varies greatly, appearing almost static in high rocky mountains, at least in terms of human memory. This probably greatly affects the distribution of some ferns and one imagines there would be less unoccupied sites for a fern like Woodsia than those favouring fertile areas, though this is not necessarily the case.

Let us consider the practical side. This Society recently visited a site in Devon, where the Oak Fern had once been reported. No such fern was found and the negative result entered in our records. Suppose that members had carried with them cuttings of the Oak Fern and planted these specimens where they judged expedient, each plant marked with the name of the member and entered in the records. Visiting the site in a couple of years' time, we should probably find most of the sites occupied only by labels, though some members might have shown special acumen. We could then hold a post mortem, compare theories to explain these deaths and try again. Eventually we should acquire an eye for exactly the right microclimate.

This would be new knowledge. At the moment most members know how to raise spores of, say, the Woodsia and can produce pot plants, but how many would know how to pick out the site, perhaps the Brecon Beacons, where these plants would grow, even supposing they would grow in those hills ? If, however, experiments were conducted over a generation, even in a very small way, a great amount of information would be acquired. This information would be of the utmost practical value to lovers of nature. If a colony of rare plants was threatened, then information would exist to decide the choice of a new site and move the plants with some chance of success.

The work involved in experiments would not be great, for to raise a pot full of spores is not much trouble and planting would be done while we were also searching for ferns. The sense of working on something constructive, and the gambling element involved, would be likely to appeal to members, particularly the younger men, who are less inclined to enjoy advanced taxonomy. The only requirement is permission from the National Trust or similar body to work in two or three typical areas, not too remote from London.

HARDY FERNS FOR THE ROCK GARDEN

By H S Wacher

Since I wish to confine myself to plants which I have grown and consequently of which I have first-hand knowledge, most of my remarks will concern those most suitable for the rock garden, which is one of the most effective and successful sites for their cultivation. But since I am a mere horticulturist and by no means a botanist, I must ask to be excused if my nomenclature is not up-to-date, for the botanists have been very busy in recent years with ferns - as with many other groups of species - much to the bewilderment of the average enthusiast, who finds names in the lists of trade growers which do not correspond with those in the latest official lists. I commenced my collection in the 1920's, my guide at that time being C T Druery's comprehensive "British Ferns and their Varieties", and since then A J Macself's "Ferns for Garden and Greenhouse" (Published in 1952) has brought my knowledge of nomenclature more up-to-date. However, it must be acknowledged that the multiplicity of Latin names, given to describe many of the varieties, is at first bewildering; but if one's memory has retained some of the Latin learned at school, these names describe very accurately the type of fronds found in each of the varieties. In fact, it is quite impossible in an article of this nature, to describe verbally the fronds of many species and varieties which I grow. Druery himself in his book, relies upon imprints from actual fronds with which to describe them in detail, and most effective this is.

My collection has originated from -

1 Trade growers, of whom I consider Mr Reginald Kaye to be probably the leading specialist in this country today.
2 Collecting in the wild, chiefly in the mountains of Europe, and a few in Scotland and Devonshire.
3 Spontaneous sports which have arisen in most unexpected numbers in my garden, and which defy anyone to give them varietal names, although many are very attractive and quite distinct from their parents.

With a view to obviating the need to describe in detail the most suitable sites for cultivation for the various species, I divide these notes into two sections -

Group 1 Those which need to be grown in rock crevices, where most do not object to a certain amount of direct sunshine, provided that they have a cool root-run, by packing the crevices with moist peaty soil.
Group 2 Those which thrive better when grown with shade, in moist peaty soil, more or less on a flat surface.

Group 1 - Adiantum All of the species belong to my Group 2, with one exception - A capillus-veneris. I found a very

dwarf form of this fern growing in limestone crevices in Gorges du Cians near Valberg in the Maritime Alps. The fronds are only two inches high, but otherwise typical of the common Maidenhair Fern. Unlike the type plant which is not hardy outside in this East Kent district, it was quite hardy with regard to our winters, by being deciduous, but unfortunately it was destroyed by excessive summer heat (95°F) in 1959, while I was away on holiday and unable to care for it.

Asplenium All of this section are evergreen and very dwarf, with great beauty of texture. A adiantum-nigrum (Black Spleenwort), so named on account of its black main stem, is quite common on the Central European mountains. My plants, with fronds of four inches, were collected at Zurs in the Austrian Voralberg. A fontanum is quite a rare fern, both in the wild and also in cultivation. I found it in quantity in the Gorges du Cians, where also I found a crested variety which did not survive; also very locally in the Gavarnie and Andorra districts of the Pyrenees. The three inch fronds are beautifully incised throughout their entire length. A ruta-muraria (Wall Rue) is one of the smallest of ferns. It is quite common all over this country in the crevices of walls and stone bridges, with fronds from two to four inches in length. It is essentially saxatile, thriving in tufa rock, but impossible to keep alive under any other conditions of culture. A septentrionale (Forked Spleenwort) more resembles two to three inch tufts of grass, with forked tips, rather than the accepted fronds which constitute a fern. It is to be found locally in many mountain districts, but is reluctant to increase much in cultivation. It seems to prefer a very shady crevice or the foot of a boulder. A trichomanes (Maidenhair Spleenwort) is probably the best known of this section and is found in most mountain regions. It is common throughout this country, not particular as to lime or granite. In a tight crevice the fronds remain at three inches, but reach six inches when grown in plentiful leafmould. I have a delightful crested variety, which is seeding itself true and freely. A viride (Green Spleenwort) is the commonest of this group to be found in the mountains, but always on granite and never on limestone. (In this country it is regarded as a limestone plant, and is very seldom found in habitats where some form of lime is not present - EDITOR). In the wild it makes very wide tufts at the base of boulders, but in cultivation it is decidedly temperamental.

Ceterach officinarum (Rustyback Fern) is very attractive with fronds edged with fine brown hairs. In rich soil these may reach six inches, but in tufa crevices, where it seeds itself freely, they lie out flat and scarcely exceed two inches. It will stand more sun and drought than any other

fern, under which conditions the fronds curl up tight and turn a brown colour, looking quite dead, but upon the first shower of rain they revive completely overnight.
Cystopteris the Bladder Fern, is so called by reason of the bladder-like covering to the spore-heaps. All forms are alpine in their distribution, and are frequently found between large rocks used to build dry walls, where they develop slowly spreading and deep rooting tufts. All are deciduous and very similar in formation of fronds, which are narrow and average six to eight inches in length. Those most commonly seen are C alpina, C dickeiana, C fragilis, and C bulbiferum which develops fronds to one foot, bearing adjacent to the main stem, small bulbils which fall off when ripe and give rise to new plants.
Hymenophyllum tunbrigense is to be found in deep shade on dripping rocks around Tunbridge Wells in Kent, where it forms dense mats of two to three inch fronds resembling moss. I have found it quite impossible to grow.
Woodsia hyperborea (now W alpina) and W scopulina are very similar to each other, bearing small two to three inch fronds, and resembling a dwarf form of Cystopteris.
To conclude this group, I mention Cheilanthes siliquosa, Cryptogramma acrostichoides, Pellaea atropurpurea and Gymnogramma (now Pityrogramma) triangularis, but only to record that I have never been able to keep any one of them for long enough to get to know them, and I wonder whether they are hardy.

(To be continued)

BRITISH FERN VARIETIES - The Polystichums By J W Dyce

I get many enquiries concerning suitable ferns for the garden, and I find that beginners have in mind mostly the fern species only, being unaware of the many fine varieties with which our native ferns have presented us. How often a garden is seen with a well-grown display of ferns - all species; and the thought occurs how much finer and more interesting it could be if only some of the excellent varieties available were incorporated in it. But fern-growing has been out of fashion for so long that it is understandable how to most people they are quite unknown. It is the discovery that such plants exist which has impelled many of our newer gardening members to join the Society to learn more about them. I propose, therefore, to write, with the beginner in mind, a series of articles dealing with the varieties of the British ferns. Some species have given us an abundance of magnificent forms. some only a few, while others have produced no variation at all. A few without varieties require none, and are most

acceptable garden plants in their own right.

For me, the Polystichums take pride of place, and my first article will deal with them. We have three species in Britain, all of them evergreen, Polystichum lonchitis a rare plant of the mountains not much given to variation, P aculeatum locally frequent throughout the whole country with a few varieties, and P setiferum a common fern of the warmer regions in the south and west of England, and the generous donor of several hundreds of varieties, some of them most magnificent plants with extremely fine cut pinnules and fronds of delicate beauty, rivalling the finest exotic ferns, but withal completely hardy. Not all of them are easily acquired, although a good selection is available from fern nurseries, and others will be found in the collections of keen growers. Often too, in old gardens we come across them, their owners proud to be the possessor of some fine acutilobe or divisilobe which has been in the family for two and even three generations. Over the years I have acquired many plants from such sources in the shape of offsets or bulbil-bearing fronds. The latter can be pegged down in large seed-pans with the bulbils along the main rachis in close contact with the compost when, kept under humid conditions, they will develop roots, and in due course the individual plants can be separated and planted on.

In the past P aculeatum produced several varieties, most of them crested, but they seem to have all disappeared although it is possible that some may still be found in old gardens. The finest of the aculeatum varieties, P aculeatum "Pulcherrimum Bevis", is fortunately still available today and is a strong-growing handsome fern with dark green glossy fronds, and long curving pinnules which overlap at the frond apices and pinnae tips to give a plaited appearance. It was long regarded as a barren fern, but very rarely, by dint of the closest scrutiny with a magnifying lens, a single tiny spore-heap may be discovered, and this can indeed be treasure-trove. A few such discoveries in the past have given us some of the most remarkable ferns we possess - P aculeatum "Pulcherrimum Druery" an improved form of the parent, P aculeatum "Pulcherrimum Plumosum Green" a dwarfer plant with finely cut pinnules, and P aculeatum "Pulcherrimum Gracillimum" a whole series of plants none quite alike, with the pinnules greatly lengthened, in some of them to nearly three inches, and expanded into delicate tassels at the ends. All these ferns are hardy with the exception of the very finest of the Gracillimums which although inherently hardy, need protection because of their frail development.

The decline of interest in fern growing during the interwar

years caused the best of the large collections to be dispersed, and in one very bad case, destroyed, resulting in the loss of many of the best fern varieties, chiefly of P setiferum. Consequently, only a fraction of the large number grown are now known to exist, although many, unknown by name, undoubtedly continue to be grown as the heirlooms mentioned earlier.

Variation in P setiferum can be divided into several classes, but for the beginner the acutilobes and the divisilobes are the best and most interesting to start with. P setiferum "Acutilobum" has finely cut narrowed pinnules, giving a graceful delicacy to the fronds, which in some cases are proliferous with a mass of bulbils along the main stems, and when these develop their tiny half-inch fronds in the autumn, the effect is very beautiful. There is a large number of acutilobes, many of them very much alike, so we are content not to worry about the multitude of names under which they were known in the past.

P setiferum "Divisilobum" continues the division and development of the pinnules one or even more stages beyond "Acutilobum", and this very fine elaborate cutting gives the plants a delicate refinement. The plumoso-divisilobes develop the pinnule division still further and have fronds resembling large plumes with long much divided pinnules, densely overlapping to give a mossy effect. Some named varieties can be procured, and I recommend P setiferum "Divisilobum Bland" a very good wild find from Ireland, and P setiferum "Plumoso-divisilobum Densum" a smaller plant with heavy dense fronds. The former produces bulbils very freely and is thus easily propagated.

None of the Polystichum varieties I have mentioned are tall growers, and most of them have a decumbent habit and spread their 18 to 24 inch fronds outwards or even horizontally so that their magnificence is well displayed. Kept to single crowns they have a star-fish appearance which shows them to excellent advantage when they are planted in the front of the border, where they can be looked down upon and their beauty fully appreciated. They are all hardy vigorous plants which will grow in open exposed places, but to get the best results they should be given light shade. Any good well-drained soil which does not dry out too much suits them, and they appreciate top-dressings of leafmould and well composted garden rubbish. A dusting with bonemeal occasionally around the plants is all the feeding they require, and they will go on year after year giving pleasure to the grower. Secondary crowns should be removed from specimen plants, and can be used for increasing stock or given away to fern friends.

FERNS FOR HOUSE DECORATION

By H J Bruty

Ferns are excellent plants for indoor decoration, and the following are good ones for this purpose. Platycerium alcicorne or bifurcatum is one of the best, provided it has been grown in a reasonable atmosphere, not too warm or moist. It will last up to one year and longer in a cool light room, but it is not possible to grow this fern, or any other, if there is gas in the room. Cyrtomium falcatum and its variety "Rochfordii", are quite popular and will grow in a very low temperature. Pteris cretica and its varieties "Albolineata", "Rivertoniana" and Wimsettii", P tremula and P ensiformis "Victoriae" a variegated form, are all useful and quick growing. The Nephrolepis are also popular and N exaltata is the best, with its multifid forms which do very well, as do N cordifolia and N duffii an Australian species. Asplenium bulbiferum and A lucidum are equally good but A nidus, the Bird's Nest Fern, which is greatly liked, will not stand so low a temperature as the others. Adiantum chilense and A cuneatum with some of the cultivated varieties introduced by fern nurseries are also good. Pellaea rotundifolia, a very decorative fern from New Zealand, is a very slow grower, and is more expensive to purchase than the others.

The great fault when growing ferns indoors is over-watering. When required, a thorough watering should be given and then the surface of the soil should be allowed to dry before any more is given. If there is no heat in the room, three times a week during the summer and twice during the winter should be sufficient, but if the room is heated more will be required. Ferns should never stand in water, and any surplus in the saucers must be emptied away. Watering with Solufeed once a week during the summer will help to keep them looking green and fresh.

The chief indoor pest on ferns is aphides, which are common on most house plants grown in a dry atmosphere. Syringing the plants out of doors with a weak insecticide, such as Derris, is the best method of keeping this pest at bay.

READING CIRCLE

For the information of our newer members, we have a Reading Circle which circulates the American Fern Journal among those interested. This is issued quarterly, and contains much valuable information for those seriously interested in ferns. Please advise the Secretary who will add your name to the list.

FERN BOOKS By J W Dyce

During the latter half of the last century when the fern cult was at its zenith, books on ferns were published in large numbers, many of them serious and important contributions to our knowledge of these plants, some of them botanical, some field handbooks, and others dealing in a very comprehensive way with the multitude of varieties which were being discovered in the wild and raised in cultivation. Many other authors cashed in on the craze, and produced a glut of books with little to commend them except that they contained some information about ferns, and that seemed sufficient to ensure a ready sale. Many of these books are still available secondhand, and very few old bookshops are without at least one or a few of them, including those which are still valuable acquisitions today. A few good ones have been published since the last war, including "Hardy Ferns", written by our member Mr Reginald Kaye, who owns the only specialist fern nursery in the country, and has a very wide knowledge of British ferns, both species and varieties, and how to grow them successfully. His book puts a lot of this knowledge at our disposal, and is an extremely valuable addition to the libraries of all who are interested in ferns. Recently, a fifth edition of Hyde and Wade's "Welsh Ferns", revised and expanded by Mr S G Harrison, the present Keeper of Botany at the National Museum of Wales in Cardiff, has been published. Although dealing with the ferns of Wales, in actual fact it covers all the British ferns and their allies, and is by far the best existing book for the identification of the species.

One of our greatest writers on ferns was Thomas Moore, who was the Curator of the Chelsea Physic Garden during the period when ferns were most popular. In 1855 he published a magnificent work, "The Ferns of Great Britain and Ireland", dealing with both species and varieties. This is a folio edition containing 51 full-page plates in colour, printed from actual impressions of the fronds in soft metal, a process known as "nature-printing" which was perfected by Henry Bradbury. This splendid book can still be picked up occasionally, although I am afraid that the price has risen very very much since I acquired my copy for 15/- over 25 years ago ! A few years later, in 1859/60, an octavo edition entitled "Nature-Printed British Ferns" was published in two volumes, again with full-page plates in colour, 114 of them, of the same high quality but reduced in size to fit the smaller pages. Both editions are standard works on the subject even after the lapse of well over 100 years, and are prized possessions of those of us who are fortunate enough to possess them. Unfortunately, most booksellers are now only too well aware of their value and charge accordingly.

However, one may still unearth them - literally! - from the dust of an odd corner in some of the little overcrowded secondhand bookshops which have failed to move with the times and can still be found, but more and more rarely as the years pass. Moore wrote many other books on ferns, all of which are worth acquiring.

An even more prolific writer during the same period was E J Lowe, whose "Our Native Ferns" was first published in 1865/7 in two volumes, covering species and varieties, and containing many excellent full-page coloured illustrations, but not done by the nature-printing process. A much more ambitious work, "Ferns: British and Exotic", was published in 1855 in eight volumes - some editions are bound in four rather unwieldy volumes - and as the name implies, covers foreign as well as British ferns. There are 479 full-page colour illustrations perfectly done, and these volumes are indeed a treasure for the fern lover. In 1862 followed what can be regarded as a supplement to the preceding volumes, "New and Rare Ferns", another large book continuing the same theme, with a further 72 illustrations of the same quality. An extremely useful little book published in 1891 in the "Young Collector Series", is "British Ferns and Where Found", in which Lowe lists practically every variety of the British ferns which had been found up to that date. It contains 45 species and 1861 varieties, all with descriptive notes and where found or by whom raised. It forms a most informative reference book today. Another book by this author, "Fern Growing", is the subject matter of a very interesting paper by Dr John D Lovis in the 1967 issue of the Gazette.

No paper on the old fern books is complete without a reference to C T Druery, the first editor of the British Fern Gazette, and the most prolific fern writer of them all, although we have only a few fern books from his pen, the most important being "British Ferns and their Varieties", published in 1910. It is a standard work, and the "bible" of the collector of fern varieties; it is well supplied with line drawings, has 40 colour plates, and an appendix of 96 nature prints in colour. "Choice British Ferns" appeared in 1888 with descriptions of varieties, and on behalf of our Society and assisted by several members, "The Book of British Ferns" was published in 1902. Many unworthy variations had been named and by this time many good ones had been lost, and this book brought Lowe's "British Ferns and Where Found" up-to-date - it is another very useful reference book. The early volumes of the British Fern Gazette, until his death in 1917, were filled almost exclusively with contributions from Druery, and these form only a fraction of his writings. The Society is fortunate in possessing eight huge volumes of his press cuttings,

comprised mostly of his additional fern writings in all manner of papers and periodicals.

I have mentioned only a few of the more outstanding books on ferns, those which all keen collectors and growers of varieties should endeavour to acquire - with them you have a good comprehensive fern library. Many more were written by well-known authors, such as, to mention only a few, W J Hooker, E Newman, A Pratt, and J E Sowerby. All these and many others appear in a list of fern literature which I published in Newsletter No 5. I have some spare copies of this list if any of our newer members would like one.

C T DRUERY'S WRITINGS

As a follow-up to the History of the Society in Newsletter No 6, the following letter by Druery, appearing in "Amateur Gardening" on 21 November 1908, is of interest as pin-pointing the turning point of our Society from a purely local one to a national, and indeed, an international one. With his publication of the British Fern Gazette in the September of the following year, the membership leapt from about 30 to over 120 in a very short time -

"Although the British Pteridological Society, established at Kendal, has done good service as a centre of the British fern cult for many years, there is no doubt that its purely local character militates against its wider usefulness, and now that our beautiful and in many cases unique British ferns are becoming popular, a society on a more extended basis is desirable. The object of such a society should embrace a periodical publication describing and illustrating new finds and fresh developments in cultural selection, and also providing such general data as may assist the amateur in growing and propagating and acquiring a knowledge of what is being done generally in this particular direction. In the United States there are several societies devoted to indigenous ferns and their varietal forms, and periodical publications are issued with contributions from inside and outside sources which are very interesting. In Great Britain the only periodical issued is the brief annual report of the above-named society, although the amount of material in the British Isles is, from the varietal point of view, inexhaustible, the comparatively few species having yielded several thousand distinct varieties, which are constantly being added to by fresh discoveries of wild 'sports' or new developments under culture. Under these circumstances the writer who for fully thirty years has been practically the champion of British ferns in the British horticultural press, and in his two standard works, 'Choice British Ferns' (now out of print), and 'The Book of British

Ferns', would be glad to hear from their admirers by a simple postcard in order to judge whether such a society is practicable on the basis of a moderate subscription, sufficient to cover printing and other expenses incidental to the programme indicated. Other papers please copy."

SPORE AND PLANT EXCHANGE

Members wishing to exchange spores and plants will find the Newsletter a useful medium for this purpose, and all offers and requests will be printed in the issue following their receipt. Subsequent correspondence must be between the interested parties direct and not via the Secretary.

The American Fern Society Spore Exchange requires spores of all kinds, and their list of those available can be obtained from the organiser, Mr Neill D Hall, 1225 NE 95th Street, Seattle 15, Washington, USA.

The University of Hull Botanic Garden issues a list of seeds and spores offered for exchange, obtainable from the Assistant Curator, Botanic Garden, Department of Botany, The University, Hull, Yorks.

The following overseas members are interested in the exchange of spores -

Mrs E S Bayley, Danbury Park, Postbox 21 MR, Marlborough, Salisbury, Rhodesia

Mr G Kunkel, Camino Viejo 9, Tafira Alta, Las Palmas de Gran Canaria, Canary Islands

Mrs Sylvia Leatherman, of the Los Angeles International Fern Society, 2637 North Lee Avenue, South el Monte, California 91733, USA

Miss K H Stocker, Mapua, New Zealand

Mrs G E Tierney, 593 Buchanan Street, Hillside, New Jersey 07205, USA

Rev Philip F Tilghman, PO Box 12, Nambucca Heads, New South Wales, Australia

WANTED

Back issues of the British Fern Gazette, and old fern books

Members with old Gazettes or fern books for which they have no further use, are invited to present them or sell them to the Society. There is always a demand for old fern books from new members, and if you are considering disposing of yours, please give us the opportunity to acquire them.

BOOK REVIEW

By J W Dyce

"Gardens on a Higher Level" by Anne Ashberry, 152 pages, Hodder and Stoughton, London, 1969. Price 45 shillings.

Miniature plants and landscapes have a strong fascination, and this fascination grips strongly as we read through the pages of Anne Ashberry's latest book, one more in her delightful series dealing with small plants and how to grow them to best advantage.

Miss Ashberry is well fitted to write on this subject, for her nursery can be regarded as a miniature one in size, but contains an astonishing collection of small-growing flowers, alpines, trees and shrubs, growing in rock-work, walls, stone troughs and other containers, both outdoors and indoors. She and her partner, Miss Glegg, both members of our Society, are skilled plantswomen, with an able facility to pass on their knowledge, Miss Ashberry through the written word, and Miss Glegg through her superb drawings which enrich the pages of their books.

This book deals with miniature raised gardens of all kinds in which the plants can be well displayed, with instructions and illustrations on their preparation, planting and care. There is a chapter on designs with detailed layouts, well depicted by line drawings and portrayed by many colour and black and white photographs. These photographs are mainly of gardens in the nursery, and demonstrate well the skilled expertise of these ladies in the landscaping and planting of tiny gardens. Much use is made of miniature trees and shrubs, all natural slow-growing forms and not artificially stunted. Suitable trees and other plants are fully listed and described, including the small-growing ferns, and all told, the book forms a most useful reference work for the miniature gardener, and those who, as Miss Ashberry states, have reached an age when ground level is too far away, and gardening must be done on a higher level.

The book is well presented by the publishers, and we congratulate Miss Ashberry and Miss Glegg on another excellent production, which at 45/- is reasonably priced.

EARLY ISSUES OF THE BRITISH FERN GAZETTE

The first five volumes of the British Fern Gazette have been reprinted by a modern photographic process, and complete sets from Volumes 1 to 9, also separate issues, are available from the Secretary, who will supply particulars. The early volumes deal chiefly with the variations of the British ferns, and are written very largely by C T Druery, and later, by Dr F W Stansfield, both outstanding authorities in this field.

NEW MEMBERS AND SUBSCRIBERS

ACOCK Patrick J, 61 Sweeps Lane, St Mary Cray, Kent
ADELAIDE BOTANIC GARDEN, The Library, North Terrace, Adelaide, South Australia 5000
ADLAM K W H, Moonrakers, Busgrove Wood, Stoke Row, Near Henley, Oxfordshire
ALLCOCK Mrs Irene F Macaulay, Beechwood, Cauny Hill, Newby Bridge, Ulverston, Lancs
BEER L W, Horticulturist, Botanic Garden, University of North Wales, Bangor, Caernarvonshire
BELLRINGER Dr H E, Gray Lodge, Wootton, Bedford
BUTTERFIELD Miss Margaret E, 41 Midland Road, Baildon, Shipley, Yorks.
COKE Lt Col P G, Robin Hill, Stinchcombe, Dursley, Glos
CORBIN P G, Marine Biological Association, The Laboratory, Citadel Hill, Plymouth, Devon
COUGHLIN R V and Mrs R, 17 Alvechurch Highway, Lydiate Ash, Bromsgrove, Worcestershire
CRAIG Jack E, 721 Mabase (Mikadodai), Shimizu-shi, Shizuoka-ken, Japan
CRAMP J K, 60 Stillness Road, Forest Hill, London S E 23
CROFTS Mrs Ann, Stonethwaite, Borrowdale, Keswick, Cumberland
GERBER-CLAVUOT Adolf, Adler-Apotheke, Gemeindestrasse 3, 8032 Zurich, Switzerland
GORDON L S, 41 Pearman Street, Lambeth North, London S E 1
GREEN Miss V, Honeysuckle Cottage, Halstead Road, Aldham, Colchester, Essex
HATHAWAY S G, 20 Hillside Grove, Mill Hill, London N W 7
HENDERSON Mrs Pamela V, Brockhall, Flore, Northampton
HOLMES Anthony, 9 Rosebery Mount, Shipley, Yorks
HOVLAND Johannes, 5610 Oystese, Hardanger, Norway
IOWA STATE UNIVERSITY, The Library, Ames, Iowa 50010, USA
KANE Frank, 1745 S W 70 Court, Miami, Florida 33155, USA
KLEKOWSKI Dr E J, Court Square, Montague Centre, Mass 01351, USA
KNOUSE J A, 1338 Sleepy Hollow Road, York, Penn. 17403, USA
LABORATOIRE DE BOTANIQUE PHANEROGAMIQUE TROPICALE, 16 Rue Buffon, Paris Ve, France
LEE W T, 234 Stanhope Road, South Shields, Co Durham
MANN LIBRARY Albert R, Acquisitions Division, Ithaca, New York 14850, USA
MASSACHUSETTS UNIVERSITY, The Library, Amherst, Mass 01002, USA
MERRYWEATHER J W, 5 St Barnabas Road, Cambridge
MOORE Miss Teresa J, Cleeves, Evesham Road, Broadway, Worcs
MOORLAND ROSES, 1 Whingrove Avenue, Meltham, Huddersfield
MURRAY W R, 434 N Citrus Avenue, Los Angeles, California 90036, USA
O'SULLIVAN Robin, 5 Ardfallen Estate, Douglas Road, Cork, Eire

PANJAB UNIVERSITY, The Library, Chandigarh 14, India
PAYNE E M, Tilgate Cottage, Lodge Hill Lane, Ditchling, Hassocks, Sussex.
PICKERING Major C H C, Casa Velha da Casa Branca, Funchal, Madeira
RIGBEY G F L, 23 Park Road, Barry CF6 8NW, Glamorgan
SCHOLLICK Mrs M W, Malthouse, 96 Church Way, Iffley, Oxford
SEHO Miss Ann, 4 Highcroft Road, Newport, Monmouthshire
SHERMAN Mrs Dorothy, Doone Burn, Woodlinken Drive, Verwood, Wimbourne, Dorset BH21 6BW.
SIMPSON Eric, Washdyke House, Freiston Road, Boston, Lincs
SMITH Mrs W E, 128 Averil Road, Leicester LE5 2DB
TILGHMAN Rev Philip F, P O Box 12, Nambucca Heads, New South Wales, Australia
WILSON Mrs Eva, 44 Fitzalan Road, London N 3
ZURICH UNIVERSITY BOTANISCHER GARTEN UND INSTITUT FUR SYSTEMATISCHE BOTANIK, Pelikanstrasse 40, 8039 Zurich, Switzerland

OBITUARIES

It is with regret that we announce the deaths of the following members -

Harry F Greenfield, of 29 Hillydeal Road, Otford, Sevenoaks, Kent, who died in September 1969 after several years of illness. He was the only son of our Vice-President and Grand Old Man of the Society, Mr P Greenfield. To his widow and family, and to his father we extend our deepest sympathy in their great loss.

Campbell Henderson, of 2023 West 48th Avenue, Vancouver, B C, Canada, died in April 1968, but the news only reached the Secretary this year. He was a close friend of the Wipers, one of the Lakeland families who originated our Society, and like them, was a keen grower of our British ferns in Vancouver.

Mrs Jackson, of Knotts View, Stonethwaite, Borrowdale, Keswick, Cumberland, the wife of our Vice-President, Mr Fred Jackson, died in April 1969 after a long illness. She was well-known to many of our older members who have often enjoyed her hospitality in years gone by. We extend our deepest sympathy to Mr Jackson and his family.

PLEASE COMPLETE AND RETURN AS SOON AS POSSIBLE

To: Mr R F Cartwright, 143 Pittmans Field, Harlow, Essex.
Tel: Harlow 26014

I hope to attend the meetings marked 'X' below. Please keep me informed.

(BEFORE FILLING IN THE FORM PLEASE READ THE NOTES BELOW AND ALSO THOSE APPENDED TO THE MEETINGS PROGRAMME.)

NOTES FOR PASSENGERS -

Lifts cannot be guaranteed to and from venues.
You will be advised of car-owners, if any, living near you, and all enquiries must be made direct, enclosing STAMPED ADDRESSED ENVELOPES for replies.

You are expected to share expenses with car-owners.

Mark 'X'		Members with cars		Members without cars	
		No. of spare seats available for passengers to and from venues	No. of spare seats available for passengers during meetings	Making own travel arrangements	Would like lift to and from venues
	11 Fern Houses, Kew 9 May				
	2 Dorset 22/24 May				
	3 South Wales 12/14 June				
	4 Isle of Mull 27 June/4 July				
	5 Lake District 10/12 July				
	6 Suffolk/Norfolk 24/26 July				
	7 Mr Schollick 8 August				
	8 Ribblesdale 21/23 August				
	9 Silverdale 29 Aug/5 Sept				
	10 Sussex 18/20 September				
	11 Wye Valley 2/4 October				

NAME .....

ADDRESS .....

.....

.....

THE BRITISH PTERIDOLOGICAL SOCIETY

MEETINGS PROGRAMME FOR 1970

Saturday 21 February	Indoor Meeting at the British Museum (Natural History), Cromwell Road, London S W 7, from 3 pm. Talks, discussions and conversazione continuing into the evening, with buffet meal available.
Saturday 9 May	Visit to the Fern Houses at Kew Botanic Gardens. Meet at 2.30 pm outside the Fern Houses.
Friday/Sunday 22/24 May	Weekend Meeting in Dorset. Leaders - R F Cartwright and J W Dyce. Centre - Talbot Hotel, Iwerne Minster, Blandford, Dorset. Tel: Fontmell Magna 269.
Friday/Sunday 12/14 June	Weekend Meeting in South Wales. Leader - S G Harrison. Centre - Sandringham Hotel, St Mary Street, Cardiff. Tel: Cardiff 32161.
Saturday/ Saturday 27 June/4 July	Week Meeting on the Isle of Mull. Leader - A C Jermy. Centre - Salen Hotel, Aros, Isle of Mull. Tel: Aros 24. The ferry service is between Oban and Craignure, and all information can be obtained from David MacBrayne Ltd, North Pier, Oban, Argyll. Tel: Oban 2285. Early reservation of car space on the ferry is advisable. NOTE - As private car transport is essential on the Island, it is hoped that sufficient cars will be taken over to accommodate the whole party.
Friday/Sunday 10/12 July	Weekend Meeting in the Lake District. Leader - Fred Jackson. Centre - Knotts View Guest House, Stonethwaite, Borrowdale, Keswick, Cumberland, (Mrs A Jackson).

Friday/Sunday 24/26 July	Weekend Meeting in Suffolk/Norfolk. Leaders - A J Worland and M H Rickard. Centre and details not yet arranged - SEE NOTES.
Saturday 8 August	Visits to the gardens of Mrs S G Gurney and Mr H L Schollick, both near Oxford. Meet at Mr Schollick's - Malthouse, 96 Church Way, Iffley, Oxford, <u>at any time up to</u> 11 am. Bring packed lunches.
Friday/Sunday 21/23 August	Weekend Meeting in Ribblesdale. Leader - J W Dyce. Centre - Ashfield Hotel, Duke Street, Settle, Yorkshire. Tel: Settle 2224.
Wednesday/ Friday 26/28 August	Southport Flower Show. Many fern classes showing a fine selection of the best varieties. We have a Stand in the Specialist Societies' Tent. Come and see us when visiting the Show.
Saturday/ Saturday 29 August/ 5 September	Annual Excursion in Silverdale, Lancashire. Leaders - Reginald Kaye and J W Dyce. Centre - Inglemere Hotel, Arnside, Westmorland. Tel: Arnside 312.
Friday/Sunday 18/20 September	Weekend Meeting in Sussex. Leader - A C Jermy. Centre and details not yet arranged - SEE NOTES.
Friday/Sunday 2/4 October	Weekend Meeting in the Wye Valley Leaders - R F Cartwright and J W Dyce. Centre - Royal George Hotel, Monmouth. Tel: Monmouth 310.
Saturday 24 October	The Annual General Meeting to be held at the British Museum (Natural History), Cromwell Road, London S W 7, at 3.30 pm.
Saturday 24 October	Indoor Meeting at the British Museum (Natural History), Cromwell Road, London S W 7, from 3 pm (before and after the Annual General Meeting). Talks, discussions and conversazione continuing into the evening, with buffet meal available.

WILL ALL MEMBERS ATTENDING ANY OF THE FIELD MEETINGS PLEASE READ THE FOLLOWING NOTES, ALSO THOSE ON THE MEETINGS FORM

NOTE 1 With the exception of the Annual General Meeting, further necessary information regarding the meetings will be advised only to members who complete and return the Meetings Form (attached) to the Meetings Secretary.

NOTE 2 Members must make their own accommodation arrangements, but we hope to be able to supply some information concerning available accommodation, ie hotel, boarding house, farmhouse and bed and breakfast addresses in the area, for most of the meetings.
APPLY TO THE MEETINGS SECRETARY.

NOTE 3 Weekend meetings commence on the Friday evening to allow an early start to be made on the following morning. Members unable to arrive on the Friday evening, and wishing to join the Saturday and/or Sunday meetings, should advise the Meetings Secretary or the Leader beforehand, and should be at the meeting place before 9 30 am. While every endeavour will be made to do so, we cannot guarantee to leave sufficiently explicit directions to enable late-comers to follow on and make contact.

NOTE 4 Private car transport will be used, except for the meeting on 9 May. Please mark the Meetings Form accordingly.
PLEASE NOTE - Special provisions applying to our transport arrangements on the Isle of Mull are stated in the Programme, and these should be observed.

FERN HOLIDAY ACCOMMODATION

Suitable holiday accommodation is often difficult to obtain, and we are very pleased to advise that two of our members are offering this facility to members wishing to visit two of the most fern-rich parts of the country, the Lake District and Devon.

Mrs A Jackson, Knotts View, Stonethwaite, Borrowdale, Keswick, Cumberland is re-opening the home of her father-in-law, Mr Fred Jackson, as a guest house in this most beautiful part of the Lake District, and a special welcome will be given to members of the Society. As the amount of accommodation is limited, and the area is an extremely popular one for holiday-makers, application should be made to Mrs Jackson as early as possible.

Mrs E M Borup, 30 Earls Court Square, London S W 5, has purchased a small house at Sticklepath (Belstone), South Zeal, Devon, 18 miles west of Exeter and 3 miles from Okehampton. She hopes to live there from time to time, but there will be many periods when members could use it, to be self-catering; it has four beds, bathroom and electricity. The house is situated on high ground above the village, with buses close by, plenty of level car parking space, and adjacent to some of the finest parts of Dartmoor. Views extend to Exmoor and, in the winter, to South Wales. Fuller information can be had from Mrs Borup.

GARDENS TO VISIT

The Gardeners' Sunday Organisation publishes annually a booklet listing the gardens which are opened to the public in aid of the Gardeners' Royal Benevolent Society and the Royal Gardeners' Orphan Fund, and may be visited during the year from March to October. The 1970 edition of the booklet, entitled "Gardens to Visit", is larger with photographs, and can be obtained through W H Smith's or Wyman's bookstalls for 1/6d, or direct from the Organiser, Mrs K Collett, White Witches, Claygate Road, Dorking, Surrey, for 1/10d post free. For those who, during their wanderings throughout the country, enjoy visiting gardens, while at the same time supporting a worthy cause, this comprehensive booklet will prove invaluable.

NEW FERN BOOK - "The Victorian Fern Craze", by D E Allen

A copy of this book, newly published by Hutchinsons at 21s, has just come to hand. It is a history of the fern cult from its early days, full of interest, and is thoroughly recommended to all fern lovers. It will be reviewed later.

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Published by the British Pteridological Society

THE BRITISH PTERIDOLOGICAL SOCIETY

Newsletter No 8

November 1970

JAN 1 1971

SECRETARY
J W Dyce
46 Sedley Rise
LOUGHTON Essex

NEWSLETTER No 8 NOVEMBER 1970

EDITED by
The Secretary J W Dyce

EDITORIAL

During this year, 1970, over 20 countries have been taking part in a European Conservation Year, aimed at making their peoples more conscious of their national heritages, and the many eroding circumstances which operate to destroy them. So much of the architectural riches and the plant and animal life has been irretrievably lost, and we must all welcome this attempt to stimulate a greater interest in mankind towards halting the destructive forces and preserving what is left.

In our own Society the concepts of conservation have always concerned us, and they are incorporated in our Objects. Last year, at our Annual General Meeting, it was considered that they were not sufficiently emphasised, and so an Interpretation was embodied in a Resolution which was put to the Meeting and accepted, with an instruction that it be brought to the notice of all members. This was done in the last Newsletter, but its importance is spot-lighted in this special year so I make no excuse for repeating it here.

> "This Society affirms its Object, stated in Rule 2 of the Constitution, of promoting and encouraging the conservation of Ferns and other Pteridophytes. In support of this it commends to its members the following principles to be observed in collecting plants for cultivation -
>
> 1 Fern and fern allies should only be collected from well-established colonies of sufficient size, and the colony should not thereby be significantly diminished.
> 2 The abundance of the particular species in the region should also be considered, and species should only be collected where they are locally abundant.
> 3 No one should collect more than they really need, or species which they are unlikely to be able to grow.
>
> In gathering complete plants for herbarium specimens the same principles should be followed, and otherwise only fronds should be taken, if required for record purposes."

One aspect of conservation, however, is peculiar to societies which, like ours, are interested in the garden varieties of their specialist plants. There is a very great difference between a rare species and a rare variety, (ie cultivar). A rare species can reproduce itself in its restricted and specialised habitats so long as the conditions remain right, and indeed can spread to other habitats if these become acceptable for it, but this can only happen if it is left unmolested. Remove the plants, the source of spores or seeds is destroyed, and a rare plant vanishes from one of its few, or even its only, habitat. How often this happens through thoughtlessness and acquisitive greed. A horticultural variety is a very different matter. Described by the botanist as a "weak abnormal, usually monstrous or abberant, genetic form which is likely to be of little or no evolutionary significance", its genetic imbalance gives it little chance of survival in the wild in competition with vigorous normals, and it is only by good fortune that we stumble on a few of the really good ones before they succumb. They are most unlikely to propagate themselves, and it is particularly noticeable that when a good fertile fern variety is found, good progeny in the vicinity is an exceedingly rare occurrence. In cultivation its spores will, with very few exceptions, give a wealth of plants, but conditions in the wild would seem to inhibit this and it is only the very very occasional spore out of millions which succeeds in producing a plant. Of course, there are some varieties which are not "monstrous" in their development, such as Blechnum spicant var. anomalum, which does not develop separate upright fertile fronds but produces its spores on the decumbent, normally barren, ones. Such plants could have evolutionary significance and should be collected sparingly, only when found in some quantity.

It is clear, therefore, that while conservation aims demand that rare species are left intact in their wild habitats, the reverse obtains when we consider varieties, and the only way to conserve them is to get them out of the wild as quickly as possible and into the protective conditions of the garden or greenhouse. Only then can we increase their numbers and conserve them to give pleasure to plant-lovers. Many ardent "dyed-in-the-wool" conservationists fail to appreciate this difference, they are too literal in their interpretation of the word "conservation", and it behoves them to give a great deal more thought to the principles involved.

SUBSCRIPTIONS for the present year became due on 1 July. If yours has not been paid, please send the amount(£1. 5. 0.) as soon as possible to the Treasurer.

FINANCIAL STATEMENT AS AT 30TH JUNE 1970

ORDINARY ACCOUNT

1968/9	1969 30 June		£			1968/9	1969 30 June		£		
£ 377	To	Subscriptions	389	3	6		By	Balance	9	16	6
5		Donations	6	5	2			Payment to Devonshire Press Ltd additional cost blocks, plates & reprints (Gaz V 10 - part 2)	53	10	3
-		" Royal Society	250	0	0						
		Sales - £				-					
377		Gazettes & Newsletters 133 2 3						Payment to Merchant Printers balance due for reprinting of old Gazettes	6	15	0
1		Sundry 2 3 3	135	5	6						
		Recoveries for cost of blocks, plates & reprints (Gazette				-		Payment to Metloc - cost duplicating Newsletter No 7	45	4	9
-		Vol 10 pt 2)	30	10	4						
		Interest on Deposit				34					
10		Account	24	2	3						
		Sundry Debtors - Due for blocks, plates and reprints				20		Printing & Stationery	8	2	8
						33		Sec and Editorial postages & expenses	41	15	0
-		(Gazette Vol 10 pt 2)	74	1	4						
								Subscriptions - Council for £			
						5		Nature 5 1 0			
						3		R H S 3 3 0	8	4	0
						-		Transfer to ~~Reprinting~~ Publications Fund	125	0	0
								Sundry Creditor - Devonshire Press Ltd ESTIMATED cost of			
						353		Gaz Vol 10 pt 3	370	0	0
								BALANCE AT 30TH JUNE 1970 ESTIMATED	240	19	11
			£ 909	8	1				£ 909	8	1

1970 30 June		£		
To	Balance ESTIMATED	240	19	11

REPRINTING FUND

1969			£		1970			£
30 June	To	Balance	£ 354	0 0	30 June	By	Transfer to Publications Fund	£ 354 0 0
1970								
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PUBLICATIONS FUND

1969			£		1970			£
30 June	To	Balance	38	0 0				
1970								
30 June		Transfer from Reprinting Fund	354	0 0				
		Transfer from Ordinary Account	125	0 0	30 June	By	Balance	517 0 0
			£ 517	0 0				£ 517 0 0
1970								
30 June	To	Balance	£ 517	0 0				

THE ANNUAL GENERAL MEETING

At the Annual General Meeting the past year is reviewed and plans for the future discussed, so this Report enables me to pass on all this news to our whole membership. This year the Meeting was held at the British Museum (Natural History) and was followed by the Autumn conversazione. The Secretary reported to a good attendance a steady increase in membership, now over 350 and going up all the time. We have not had quite so many field meetings as last year - some were most successful but others attracted a minimum of members. These meetings are well spread throughout the country, planned to attract members living within reasonable reach of the centres, but very few such members take advantage of this and it is mostly keen ones from far afield who make our efforts worthwhile. It has been decided to introduce a meetings programme card which can be carried around, and this may help to keep the meetings dates more to the fore-front in the minds of busy people who realise too late that they are committed elsewhere and to forgetful members who remember a meeting just a week too late !

We had hoped to get the Gazette out much earlier this year, but unfortunately circumstances decreed otherwise and it was published at the beginning of October. The 1969 Newsletter was sent out in mid-November and the 1970 issue is being distributed at the same time this year.

Professor Irene Manton was elected President for her second year in Office and our six Vice-Presidents were re-elected. The retiring members of the Committee were Mr P Temple and Dr J D Lovis, and Miss H D M Norman resigned owing to pressure of work. We record our thanks to these members for their work on our behalf. Dr F M Jarrett ceased to be an assistant editor and was re-elected on to the Committee, along with two new members, Messrs B Makin and M H Rickard. This brought the Committee up to its full strength of ten members. Our editors, A C Jermy and J A Crabbe, and the secretary/treasurer, J W Dyce, were re-elected. Mr H Wenzel, a bank manager living near the secretary, was elected auditor. The election of Mr H J Bruty who has just retired from the staff of Kew Gardens where he was in charge of the fern houses, to be an honorary member of the Society gave pleasure to his many friends among us.

The Treasurer's report showed the Society to be in a sound financial position, thanks to the generous assistance we received from the Royal Society. Subscription income rose with increasing membership but unfortunately, expenses also increased including the costs of the Gazette and the Newsletter. We continued to sell complete sets of the Gazette and the income from this was set aside to cover future

publishing programmes. As our reprinting of Gazette back issues operation is now completed for the time being, the monies in the Reprinting Fund have been transferred to the Publications Fund. A copy of the Financial Statement is included in this Newsletter.

MEETINGS 1970

At the request of many members meetings are reported more fully this year. Indoor meetings have followed the usual pattern, and at the Spring one Dr Anne Sleep gave a most interesting talk on the ferns of Japan and her experiences there, accompanied by slides. At the Autumn one Professor T C Chambers from Melbourne, Australia, talked on the Blechnums which should stimulate more interest in a genus which seems to have been rather neglected by the Society. Mr H J Bruty followed with a talk on the ferns at Kew, a lecture first given to the Royal Horticultural Society in 1968. Many of us are familiar with the Kew Collection of ferns and our annual pilgrimage there in early May proved, as always, to be a popular outing. We were conducted round the fern houses by Mr Bruty and Professor Holttum, and a visit to the Herbarium was arranged by Dr Jarrett. Another most enjoyable visit, in August, was to the gardens of Mr H L Schollick and Mrs S G Gurney, both in the Oxford area. The two gardens are strong contrasts, Mr Schollick's a large open one sloping down to the Thames, and Mrs Gurney's closed in by trees in a deep wet valley, an ideal place for the many ferns which grow there, as well as many fine flowering plants and shrubs. Mr Schollick has a large collection of fern varieties which is being added to all the time. It contains many fine plants which it was a joy to see. These visits on a day of brilliant sunshine made a pleasant change from our normal weekend meetings for the fourteen members who attended, and we record our warm thanks to our hosts for their generous hospitality on that day.

Weekend Meetings

Dorset 22/24 May This meeting which attracted only four members was concentrated in the Donhead St Mary/Donhead St Andrew area near Shaftesbury. We found 14 species, all of them the common ones, but some good variety finds were made, the best being *Polystichum setiferum* 'Tripinnatum' and *P. setiferum* 'Acutilobum', along with some interesting plants of *Phyllitis scolopendrium*.

South Wales 12/14 June Under the leadership of Mr S G Harrison of the National Museum of Wales, Cardiff, the five members present visited the Vale of Neath on the Saturday. In woodland along the river 20 fern species were found, including *Asplenium viride*, *Cystopteris fragilis*,

Dryopteris aemula, Polystichum aculeatum and P. setiferum. By a waterfall Thelypteris phegopteris was plentiful and in the same place were several plants of a fine crisped form of Blechnum spicant. On Sunday we explored Kenfig Burrows on the coast. Ferns were scarce, only 4 species being seen, but Horsetails were more common and 4 were found, including Equisetum fluviatile and E. variegatum.

Lake District 10/12 July A disappointingly small number of only 4 members attended the meeting in this area so rich in ferns. Our leader, Mr Fred Jackson, who lives in Borrowdale is very familiar with the habitats of all the ferns and one can be sure of an interesting time spent in his company. Among the ferns to be seen there are Asplenium septentrionale, Cryptogramma crispa, Cystopteris fragilis, Gymnocarpium dryopteris, Hymenophyllum wilsonii and Thelypteris phegopteris. During our weekend, in very mixed weather, we hunted between Grange and Castle Crag, Great Wood on the east side of Derwent Water, Brandelhow Park on the west side, and further afield around Moss Force near Buttermere. Mr Jackson has a very fine collection of fern varieties in his garden and we were able to see some very unusual ones as well as rare Asplenium hybrids.

Ribblesdale 21/23 August This was one of our successful meetings, with nine members, good weather and plenty of good fern country, chiefly for lime loving species. On Saturday on the scars above Settle, our centre, we found 11 species, and some members were introduced for the first time to Asplenium viride, to Gymnocarpium robertianum which was abundant, and to Dryopteris villarii. Also seen were A. ruta-muraria, A. trichomanes, Cystopteris fragilis, Phyllitis scolopendrium, and in some woodland a few plants of D. carthusiana. Near Feizor on the scars and in a large wood other species were recorded, bringing the total to 16 ferns and 5 allies. In the wood were large colonies of Thelypteris phegopteris, and lower down on some wet moorland Selaginella selaginoides, Equisetum palustre and E. sylvaticum were common. On the Sunday we climbed up Moughton Fell to see the ferns in the creviced limestone pavement formations, among them the rare Polystichum lonchitis. Later, we visited an old railway cutting near Ribbleshead Station; many ferns flourish here, including Ophioglossum vulgatum in the midst of an extensive colony of the beautiful local flower, Primula farinosa.

Norfolk 11/13 September The date of this meeting had to be postponed from 24/26 July to allow us to make use of the splendid facilities offered by the Norfolk Residential Education Centre at How Hill near Ludham which made an ideal centre for a record number of 17 members attending a weekend meeting. The surrounding marshes contain some of our rare

ferns and we were able to see Dryopteris cristata, D. uliginosa which is a hybrid between D. carthusiana and D. cristata, Osmunda regalis, and of course Thelpyteris palustris which is ubiquitous in the area. On Horsey Dunes, in pouring rain, we found similar ferns. On Sunday, further afield to the west, we visited Buxton Heath, Marsham Heath, Guestwick, Heydon Church with Ceterach officinarum growing high up on its walls, a record over 200 years old, and on to Craymere Beck and Holt Lowes. D. carthusiana and some Equisetums were plentiful, but our most interesting stop was near Guestwick where a lane full of Polystichum setiferum was reminiscent of the West Country. This fern seemed to be quite common in the area. Polypodics were abundant at Craymere Beck, both Polypodium interjectum and P. vulgare, with a large clone of P.X mantoniae, a hybrid between the two species.

Sussex 18/20 September Sussex was an anti-climax after Norfolk with only 4 members attending, due possibly to the proximity of this meeting to the previous one. In perfect weather on the Saturday we joined forces with members of the Sussex Naturalists Trust at Nymans Park. The day was used chiefly to instruct the 12 Trust members in identification of ferns, and 10 species were found including Dryopteris aemula, D. carthusiana, Hymenophyllum tunbrigense, and Thelypteris limbosperma. Ditton Place was also visited but proved very disappointing for ferns. Only two of us stayed on over Sunday and in the morning visited a wooded valley near our centre to see D. aemula and H. tunbrigense. In the afternoon a hunt near Wych Cross to find a colony of Lycopodium inundatum was unsuccessful.

The Wye Valley 2/4 October This was another very good meeting with 9 members present, mostly gardening "types", and a most interesting area to work in. From our centre in Monmouth we travelled north on the Saturday to the part of the valley south of Whitchurch enclosed in the bend of the river. The roads are narrow lanes, full of ferns, dominant among them Polystichum setiferum and Phyllitis scolopendrium. Early in the day a plant of Polypodium vulgare 'Grandiceps Forster', obviously an escape from a nearby garden, was collected as well as some quite good large-growing bifid and serrate Polypodies. In the Atlas of the British Flora 25 fern species are recorded for this 10km grid square, but in the time available we only found 12, among them 3 Asplenium, Ceterach officinarum and those already mentioned. On Sunday in the Wye Valley south of Monmouth we decided there is enough work for more meetings - even one lasting a week. Brief hunts at several places was a frustrating exercise since we could see there was so much we were missing in the extensive woods. Large-growing P. setiferum 'Decompositum'

was common in one place and we noted some exceptionally fine specimens. We got the feeling that really good P. setiferum varieties could be found here. We recorded 14 species, and a dominant fern in places was P. aculeatum as well as P. setiferum and P. scolopendrium. All the party is extremely keen to return here next year, and as a Wye Valley visit is included in the 1971 Programme, we hope that other members reading this report will decide to join us.

Two more meetings remain to be mentioned, the week meeting on the Isle of Mull, 27 June/4 July, and the annual excursion to Silverdale, 29 August/5 September. The latter will be written up for the Gazette in the normal way, and it is hoped that a full account of the Mull visit will be published in due course, so in the meantime I shall comment briefly on it.

Unlike Arran, Mull is large enough to destroy the awareness of being on an island; it is a land of mountains and sea lochs and is truly described in song "of isles the fairest". We saw it under grim conditions, wet and windy, and the mountain sides streaked white with foaming streams of rushing waters. During an active week we covered much of the Island on both high and low ground. Ferns abound, although not in the numbers to be found on Arran and we recorded 26 species and 9 fern allies. Dryopteris aemula, a fairly common fern of the western Scottish seaboard, was there with the other large-growing Dryopteris species, but not D. carthusiana. Gymnocarpium dryopteris, Thelypteris phegopteris and Osmunda regalis were seen, and Polystichum aculeatum was plentiful but only one plant of P. setiferum was found. Asplenium marinum grows on the coastal cliffs, and in shady inland ravines Hymenophyllum wilsonii covers the rocks, while in two places H. tunbrigense was noted.

I hope that these fuller notes on the various meetings, together with the meetings programme card to jog the memory, will encourage more members to join us in the field next year. Many have told me they are hesitant because their knowledge of ferns is slight and they fear they will be completely lost amongst experts !! Nothing is further from the truth, most members attending meetings are beginners keen to learn something of ferns, and the "experts" are delighted to welcome and help the rawest recruit in every way possible. The meetings are very much a blend of botany and horticulture, both interests merging happily together and each with something to learn from the other. Botanical interests are distribution and hybridity, gardeners hunt for good varieties to collect, while others just want to see ferns, particularly the more unusual ones, and learn to name them - all are equally welcome.

NEW FERN VARIETY FINDS

by By J W Dyce

I have a better list of finds to report this year, most of them found during meetings at which I was present. Very few others have been made known to me - have none been found, or are the finders keeping quiet about them, or have they just not got round to letting me know ?

Our Dorset meeting in May started the season off well with finds of a good Polystichum setiferum 'Tripinnatum', and a first-rate P. setiferum 'Acutilobum'. Two other Polystichum plants of lesser merit were also collected, and on a wall we found several very small plants of Phyllitis scolopendrium, one of which is turning out to be a good 'Cristatum' with very finely divided cresting - the others are 'Muricatums' with the characteristic rough-surfaced and serrated fronds.

In South Wales by the side of a waterfall some plants of a very good crisped form of Blechnum spicant were collected. All were fairly young with fronds about 3 inches long, and they are now settling down and growing strongly. This is a rather beautiful form which I have not come across before, and I am eager to see how they develop, particularly when they throw up fertile fronds. Another interesting form of this specieswas found on Mull in several places, called 'Annomalum' which produces no upright fertile fronds, the sori appearing on the decumbent normally barren ones. Plants of a similar kind collected in Yorkshire a few years ago produced normal fertile fronds in cultivation, and we wait to see if this will happen with the Mull ones.

One of our members, Mrs K M Stevens from Tywyn in Merioneth, knowing my interest in the Polystichums, very kindly sends me fronds and sometimes plants of unusual forms she has noted in the wild. Among the plants is a small P. setiferum from the New Forest which I have identified as a dwarf form of P. setiferum 'Grandidens' with fan-shaped and deeply incised pinnules. This was a very good find and I am delighted to possess the plant which promises to retain its dwarf character with fronds about 6 inches long.

In the early days of our Society, Whitbarrow was a name well-known to fern collectors, and in the hope that we might again be able to find good varieties there, we visited the hill during the Silverdale Excursion this year. The best we could do, however, was for Reginald Kaye to find a good crested Athyrium filix-femina. This was split up among six of us, and although nothing to get very excited about, it is nevertheless a good addition to the fern borders.

During the same excursion another good find was made in the woods near Silverdale by one of our newer members, John Cramp. Phyllitis scolopendrium abounds in the wood and he

was very fortunate in spotting a plant of the variety known as 'Marginato-undulatum'. Marginatums have fleshy ridges on the backs of the fronds running parallel with the margins, and these have the effect of contracting the frond width and giving the margins a ragged appearance. In this case the margins have regular undulations almost deep enough to become a 'Crispum', and this makes the plant an excellent find, well worth a place in the garden.

While hunting on Hutton Roof early in the year, James Merryweather came across an interesting P. scolopendrium which he collected and presented to Henry Schollick, in whose garden it is now growing well. It had small rounded fronds when found as a young plant, but is now developing into a very good small-growing 'Ramosum' with thrice divided fronds heavily crested. It promises to be as good as any variety of this kind in cultivation.

Crested Male Ferns are often found in the wild, some good and some not so good. Several of the latter were seen during the Silverdale Excursion but not collected. Other minor varieties found this year included many large-growing clumps of Polypodium vulgare with serrated pinnae , seen in the Wye Valley. Some of the best were collected although far from being good varieties.

Except for the plants found by Mrs Stevens and Mr Merryweather, I was on the spot when all the other finds reported here were made. I cannot believe, however, that no other good varieties have been seen or collected, so I repeat my request to members to kindly let me know when they find any good plants.

INDOOR FERN NOTES By H J Bruty

Adiantums The Adiantums, known as the Maidenhair Ferns, are widely distributed and there are well over 100 species and cultivated varieties described. Some are quite hardy, including A. pedatum and A. venustum, but our native species A. capillus-veneris is only hardy in sheltered places where it is free from frost. Their natural habitat is on lime-stone rock so they will benefit greatly if mortar rubble is added to the compost when potting.

Since they are subject to eelworm the best way to raise the Adiantums is from spores as this prevents the spread of the pest. The spores of a number of the species will not be ready for gathering till very late in the year, not before the end of December or early January for A. henslovianum, but A. decorum and A. tenerum and its varieties much earlier. When the sporophytes are pricked out into pans it is best to put them in small clumps, three or four together, so that

good sized plants are established to fill the pans in a shorter time.

A. cuneatum and some of its varieties need to be cut down each year when the foliage is turning yellow and looks disfigured. This will probably be in December or early January but a lot depends on the temperature of the house. After cutting, they should be kept at a lower temperature for a month or six weeks to give the plants a rest, and then brought back into warmer conditions and repotted if necessary. They will need very little water until new growth appears.

The dwarf Adiantums such as A. cuneatum var. pacottii, and also those with creeping rhizomes, such as A. affine and A. latifolia, are best grown in pans, while A. caudatum, A. edgeworthii, A. incisum and A. cuneatum var. grandiceps do best in baskets. Some which do well as house plants are A. chilense, A. cyclosorum and A. excisum.

Gleichenias The genus Gleichenia, the Sun Ferns, consists mainly of tropical species, the commonest being G. linearis. They grow on waste and barren ground at the edges of forests and in open patches, as they require a great deal of sunlight. Because of their ability to grow on waste ground they fail to make much growth if potted in rich fern compost, but if put in a mixturc of bracken peat only, and kept well watered, they will do well. They do not like to have their foliage cut, so anything that looks withered or dead is best left on the plants.

Sun Ferns may be raised from spores if sown within a week of gathering as the spores lose their power of germination very quickly it seems. For this reason the number of species in cultivation is small and they must be introduced initially by means of rhizomes. This is an easy way of propagating the plants, and G. linearis at Kew will soon cover large areas of the staging if left alone.

HARDY FERNS FOR THE ROCK GARDEN (Continued) By H S Wacher

Group 2 - When one considers all the very many named sports in this Group, the numbers become far too great to include all in an article of this nature, and so I confine myself to those which I have grown and consider most worthy of note. Adiantum pedatum and A. venustum are very similar and very beautiful, with a spreading digitation of fronds at the apex of fine black one-foot stems. They need very moist but well-drained sandy peat in shade.
Allosorus crispus (Parsley Fern) is frequently to be found in the Alps where it makes very large colonies among fallen

rocks - always of granite. The fronds may reach over a foot in height in their efforts to gain daylight, while their roots go down to a great depth and are most difficult to collect. I have found it difficult to keep in cultivation. Athyrium alpestre is not often seen in cultivation. I have found it in the Maritime Alps at Valberg. It develops six-inch fronds and thrives better in a ledge on the face of rocks rather than in the flat.
Athyrium filix-femina (Lady Fern) Most of this species develop dense tufts of fronds up to two feet high. All are deciduous and collapse completely at the first frost. They dislike lime. Of the many sports which I have grown I think the best are 'Frizelliae Capitatum', ten inches high with pinnae forming small balls on the main stem and terminating in a digitate crest at the apex - this has seeded several plants which have come quite true to form; 'Gemmatum Bolton' with lovely dissected and crested ten-inch fronds; 'Minutissimum' as its name implies, very dwarf making a slowly increasing dense mat of pale-green three-inch fronds; 'Victoriae' making tall stems on which the pinnae develop in the form of "X"s. In addition to these named varieties I have an extraordinary number of spontaneous sports which defy description in general, but many of which appear to have 'Victoriae' blood in them.
Blechnum spicant is to be found locally in deep woodland in this district. It forms narrow twelve-inch fronds together with leafless stems bearing the spores. I have had a crested form of this. It definitely dislikes lime.
B. penna marina which I believe used to be known as Lomaria alpina develops tufts of crisp evergreen fronds of four inches from a root system which creeps slowly around and even penetrates through crevices in rocks. This again dislikes lime. It makes a good ground-cover around dwarf rhododendrons. There is a good crested form of this.
Lastrea (Dryopteris) gives us of course the ubiquitous Male Fern, L. filix-mas. This is frequently to be found in our woods but is possibly rather coarse for the average collection. L. dilatata is another species which is very common in woods. The fronds, two feet in height, have an air of grace, especially the crested variety. L. lepidota alpina, one foot high, also with a crested form, is allied to the preceding. L. pseudo-mas and L. propinqua (abbreviata) are very similar with stiff stems of fifteen inches which have a spring-like action when bent over. They seed themselves freely with me, including a lovely crested variety. This has to be sheltered from strong winds which are liable to snap the fronds. These persist throughout the following winter. L. thelypteris (Thelypteris palustris) thrives in bog conditions where it is possibly too invasive with its stoloniferous roots bearing fifteen-inch stems,

topped by a triangle of fronds. It is deciduous and objects to lime.
Lomaria magellanica spreads slowly by underground stolons in moist peat and shade. The twenty-inch stiff stems carry very metallic-like fronds which persist throughout the winter.
Onoclea sensibilis (Sensitive Fern) so-called on account of its habit of curling back the fronds when they are disturbed violently. These are of a pale-green colour, developing halfway up the twenty-inch stems and triangular in shape.
Osmunda regalis (Royal Fern) is well-known in Ireland. When grown in wet peat at the edge of a pool the fronds reach five feet in height with spore-bearing tips. It develops a large fibrous crown and its root system is tough and wide-spreading. In Autumn the fronds turn a lovely chestnut-brown colour. It produces a few varieties in which the shape of the fronds vary; it thrives in full sun provided its roots are never out of reach of water.

(To be continued)

FERN NOMENCLATURE - OLD AND NEW

By J W Dyce

I have long been crossing swords with Clive Jermy - very blunt ones, of course ! - concerning the continuing practice of botanists, including himself, to change the names of plants. Many of us feel that the time has now come to end the ruling, in cases where only the name is involved, that an earlier name for a species shall take precedence. At times the situation becomes most involved - take Dryopteris dilatata for example. Some years ago it was ruled that the correct specific name was "austriaca", then it reverted to "dilatata", and now it is decided once again that it must be called D. austriaca ! Growers of ferns stick to the old names, and we still find nursery catalogues listing Dryopteris under the older name of Lastrea, and many other similar cases. This can be very confusing to the more recent recruits to the cult, and the following list of all our ferns with the various names under which they are or were known, should help many people with nomenclature problems. They are listed under their latest* generic and specific names and the other older names are given alongside. I have not delved deeply for very early names which are of botanical interest only, and do not affect growers working from the old books or recent ones.

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* This is not quite correct, as a few more changes have been made recently but for the purposes of this article they can be ignored

Adiantum capillus-veneris (Maidenhair Fern)	
Annogramma leptophylla	- Gymnogramma leptophylla
Asplenium adiantum-nigrum (Black Spleenwort)	
A. X alternifolium	- A. germanicum, A. breynii
A. billotii (Lanceolate Spleenwort)	- A. lanceolatum, A. obovatum
A. fontanum	
A. marinum (Sea Spleenwort)	
A. ruta-muraria (Wall Rue)	
A. septentrionale (Forked Spleenwort)	
A. trichomanes (Maidenhair Spleenwort)	
A. viride (Green Spleenwort)	
Athyrium distentifolium (Alpine Lady Fern)	- A. alpestre, Polypodium alpestre, Pseudo-athyrium alpestre
A. filix-femina (Lady Fern)	
A. flexile	- Polypodium flexile
Blechnum spicant (Hard Fern)	- Lomaria spicant
Botrichium lunaria (Moonwort)	
Ceterach officinarum (Rusty-back Fern)	- Asplenium ceterach
Cryptogramma crispa (Parsley Fern)	- Allosorus crispus
Cystopteris alpina (Alpine Bladder Fern)	- C. regia
C. dickieana	
C. fragilis (Brittle Bladder Fern)	- C. dentata
C. montana (Mountain Bladder Fern)	
Dryopteris (Buckler Ferns)	- Lastrea, Nephrodium
D. abbreviata (Dwarf Male Fern)	- Lastrea propinqua
D. aemula (Hay-scented Buckler Fern)	- Lastrea foenisecii, L. recurva
D. assimilis	- Lastrea dilatata alpina
D. austriaca (Broad Buckler Fern)	- D. dilatata, Lastrea dilatata
D. carthusiana (Narrow Buckler Fern)	- D. lanceolato-cristata, D. spinulosa, Lastrea spinulosa

D. cristata (Crested(?) Buckler Fern)	- Lastrea cristata
D. filix-mas (Male Fern)	- Lastrea filix-mas
D. pseudo-mas (Scaly Male Fern)	- D. borreri, Lastrea pseudo-mas, L. paleacea
D. X uliginosa	- Lastrea uliginosa
D. villarii (Rigid Buckler Fern)	- Lastrea rigida
Gymnocarpium dryopteris (Oak Fern)	- Dryopteris linnaeana, Lastrea/ Phegopteris/Polypodium/ Thelypteris dryopteris
G. robertianum (Limestone Fern) (Limestone Polypody)	- Polypodium robertianum, P. calcareum, Thelypteris calcareum
Hymenophyllum tunbrigense (Tunbridge Filmy Fern)	
H. wilsonii (Wilson's Filmy Fern)	- H. unilaterale, H. peltatum
Ophioglossum lusitanica (Dwarf Adder's Tongue)	
O. vulgatum (Adder's Tongue)	
Osmunda regalis (Royal Fern)	
Phyllitis scolopendrium (Hart's-tongue Fern)	- Scolopendrium vulgare
Pilularia globulifera (Pillwort)	
Polypodium vulgare (Common Polypody)	- An aggregate of 3 species, P. australe, P. interjectum, P. vulgare (sensu stricto)
Polystichum aculeatum (Hard Shield Fern)	- P. lobatum
P. lonchitis (Holly Fern)	
P. setiferum (Soft Shield Fern)	- P. angulare
Pteridium aquilinum (Bracken)	- Pteris aquilina
Thelypteris limbosperma (Mountain Fern) (Mountain Buckler Fern)	- T. oreopteris, Dryopteris oreopteris, D. montana, Lastrea montana
T. palustris (Marsh Fern)	- Dryopteris thelypteris, Lastrea thelypteris, L. palustre
T. phegopteris (Beech Fern)	- Polypodium phegopteris, Dryopteris/Gymnocarpium/Lastrea phegopteris, Phegopteris polypodioides, Phegopteris vulgaris

Trichomanes speciosum - T. radicans
(Killarney Fern)
(Bristle Fern)
Woodsia alpina - W. hyperborea
(Alpine Woodsia)
W. ilvensis
(Oblong Woodsia)

BRITISH FERN VARIETIES - The Athyriums By J W Dyce

In the last issue of the Newsletter, for the benefit of beginners, I commenced a series of articles dealing with varieties of the British ferns, and gave a review of some of the many Polystichums which can be acquired either by purchase from nurseries or cadging from fellow members. I now turn to the Athyriums, another species which has been most prolific in the number and diversity of its aberrations, some of them ranking among the finest ferns in cultivation today. In the British Fern Gazette for 1965 (vol 9 part 6) Reginald Kaye dealt very ably with variations in Athyrium, and my task is to help the beginner to build up a good representative collection by picking out a selection of the best which can be obtained today by either of the methods above-mentioned.

There are two kinds of variation - change in the frond shape and pinnule change. In the first division the crested forms comprise the chief section, and no fern is more prone to cresting than the Lady Fern. It is almost an everyday occurrence to find them in the wild when hunting in Athyrium country, and they come up as weeds in the garden, threatening to choke out other better plants. My plan is to leave these "weeds" until they are big enough to show if they are likely to develop into something exceptionally good, and I have several very fine ones obtained in this way. During the years of fern mania in the last century when names were given to every form collected, named cristatums were legion. Fortunately, most of them have disappeared and we are left with relatively few to which special names are given. As these names are descriptive and comprehensive, most of to-day's wild finds of crested varieties can be included under one or other of them, such as 'Corymbiferum' and 'Grandiceps' two of the best, with huge terminal crests and tasselled pinnae. Among the dwarfer ones, some with reduced frond development and practically all crest, in some cases more resembling parsley than ferns, are 'Caput Medusae', 'Coronatum' and 'Gemmatum', all very interesting forms with a certain beauty. But not all the crested Lady Ferns have heavy crests and the most beautiful are the lightly tasselled ones; not many of these seem to be named, but 'Kilrushense' and 'Multifidum' are two, and I grow more

under the name 'Cristatum' including some extracted from among my "weeds". There are other forms under the name 'Percristatum' on which even the pinnule tips show minute cresting, giving a feathery look to the fronds.

The most graceful Athyriums are the large varieties with finely divided pinnules, the plumosums standing out as the best with many good named ones available, including some with crested apices and pinnae. Not many of the original good finds are still available although some may still be flourishing in out-of-the-way old gardens, but they have produced excellent progeny, procurable under the name 'Plumosum'. Druery bred some of the best ones from a wild find of 'Foliosum', and his 'Plumosum Druery' and 'Superbum' can still be purchased; both are so finely divided and delicate that they appear more suited for the filmy fern house than elsewhere. Not so fine with slender undivided pinnules are 'Clarissima Jones' on which apospory was first discovered, and 'Plumosum Furcillans' which is also lightly crested and one of the most pleasing of Lady Ferns. Another very good one is 'Plumosum Horsfall'.

The foliosums are not-so-fine versions of the preceding, but under the name there are some good varieties, including crested ones. Heavy tasselling would ruin the elegance of these two sections, but fortunately, cresting is dainty and enhances their beauty. This can also be said of the section named 'Setigerum' where again cresting appears. This form has deeply cut pinnules, finely divided into bristles, giving the plants a very distinctive appearance.

One remarkable Lady Fern, found over 100 years ago, is 'Victoriae' in which the pinnae are divided at their bases, the halves growing out at right angles to each other to give a uniform lattice effect up each side of the rachis. In addition the apices and pinnae are lightly crested. The original clone still exists, but in addition the variety comes true from spores and among the progeny are some fine dwarf forms ranging from six to twelve inches in height.

A most unusual kind of development is found in 'Frizelliae' in which the pinnae are reduced to small rounded masses along the rachis. This fern is very prolific and reproduces itself in forms ranging from six to twelve inches high, some of them crested. In general, the smaller varieties are more constant and preserve the distinctive parental character, making them very neat and lovely plants - when present, cresting adds to their charm. The larger specimens often tend to develop some of their pinnules on normal lines which ruins their beauty.

There are many dwarf Athyriums. I have already mentioned

the small-growing 'Victoriae', and there is a miniature variety, normal in appearance, which grows from four to six inches high and spreads quickly. It makes a fine plant for growing in a pan. This is called 'Minutissimum' and is easily procurable. A larger plant is 'Congestum' up to a foot high, with the pinnae and pinnules overlapping to make very dense fronds which are usually rather rigid, fleshy and extremely brittle. Some with crisped pinnules 'Congestum Crispum' and crested forms 'Congestum Cristatum' can be got. A very good dwarf one 'Congestum Minus' seldom exceeds six inches in height.

This selection of Athyrium varieties gives some indication of the wide range of diversity existing in the species. There are many other good ones which can be obtained, but with a collection of some or all of these I have mentioned, the possibilities from deliberate or casual spore sowings are tremendous, since they hold the promise of giving, among the many sporelings produced, all manner of good things, some turning up in the most unexpected places in the garden or greenhouse.

THE NELSON, NEW ZEALAND FERN SOCIETY By Kate H Stocker

The long narrow shape of New Zealand, with high mountains in the interior, provides it with a somewhat humid climate very favourable to plant life, and especially to that of ferns. From the coastal rocks up to some 3500 feet above sea-level there are thousands of acres of bush still remaining unspoiled by man's encroachment, and this provides shelter for some 130 species of ferns. There are also some tough genera which flourish on very poor land fully exposed to the blaze of the sun, such as Gleichenia and Cheilanthes, and others which relish the partial shelter of low sparse scrub on heavy clay, such as Lindsaea linearis and Schizaea.

The Nelson Fern Society was formed in 1933 by a small group of men who had become interested in cultivating ferns in their conservatories and gardens. The agreed upon purpose of the Society was "the exchange of knowledge and experience" on fern growing: to this one might today add the exchange of fern plants.

The Society meets ten times a year for lectures and discussion, and it also arranges outings to fern haunts for its members. The membership now stands at about 80 with some dozen junior members and perhaps 20 country members. These last live in distant parts of New Zealand and Australia and we always arrange to take them out into the country when they visit this province, and see that they go home with some specimens of whatever they were seeking.

Many of us have handsome ferneries under light pole shelters and also it is a matter of pride to grow many species out in the garden where perhaps a few native trees may give them a little protection from frosts (up to perhaps 10 degrees), and from too much sun which provides pleasantly hot days, off and on, from about September to April.

Several members procure fern spores from abroad and amuse themselves raising exotic ferns for distribution among other enthusiasts: we also have, and indeed cherish, the descendants of various European ferns which were brought out here in sailing ships by pioneer settlers in what we call "the early days", say 100 years or more ago.

From time to time we are asked for spores of certain ferns by botanical gardens and societies or universities in other countries, and we are very happy to be able to comply with such requests.

COUNTY FLORAS By Martin H Rickard

In a recent Newsletter our secretary gave a list of <u>some</u> of the fern books in his collection. I too have a collection of fern books (be it only a small proportion of his) and I find them full of interesting reading, but to the fern hunter they are often inadequate.

In early fern books the known distribution of each species was almost always given, and the monotony with which the same old habitats kept recurring was rather frustrating, but at least information on this subject was available. During the past 50 years however, very few fern books have been published, and of those the only one known to me which lists localities is "Welsh Ferns". Since the decline in fern book publication the many new discoveries have only been traceable through County Floras; from the fern point of view some floras are barely worth having, but many list very exact localities. Unfortunately, the second-hand floras are several times more difficult to come by than fern books - out of approximately 200 enquiries at various times to about 70 different second-hand booksellers I have as yet uncovered only 17 floras. On the credit side, unlike fern books there have recently been several <u>new</u> publications, with the promise of still others to come.

For those people interested in this aspect of pteridology, here are some opinions of the small number of the books with which I am familiar.

<u>S W England</u> Few recent floras are available, although Paton's "Wild Flowers of Cornwall" is very useful to the fern hunter; much of the success of the 1969 Annual

Excursion to Launceston in Cornwall was due to this book. The best Devon flora was written by Keble Martin and Fraser (1939), and this is still very useful. Most records are given only on the parish system, but the asking price for second-hand copies of this book (£5-£8) is proof enough of the quality of the work. For the variety specialist the fern section, written by T. Moore, in Ravenshaw's flora of 1872 is probably more interesting.

Central S England Several of the southern counties have had floras published recently all, as far as I know, still available. They are Good's "Geographical Handbook of the Dorset Flora" with two supplements, Grose's "Flora of Wiltshire" and Bowen's "Flora of Berkshire". Of these the first two have large sections devoted to different aspects of ecology, both in their own way repaying reading although little specific distributional information is included. Good's book shows Dorset to be a surprisingly (to me) rich county fernwise with much information, particularly in the supplements. The Wiltshire book is more specific but unfortunately the fern flora is not very inspiring. Of the three books Bowen's is certainly the best bet for the fern hunter, being based on 1 km squares - many uncommon species occur in the county and their distribution is always accurately recorded using this technique. On my few excursions into Berkshire I have successfully hunted for Adiantum capillus-veneris (Sonningbridge) and Pillularia globulifera (South Lake, near Reading) with the aid of this book.

S E England Floras in this area are generally 30 or more years old, although floras of Surrey and Sussex published in 1931 and 1937 respectively do give very much useful information, many of the habitats listed still rewarding search. Indeed I successfully visited a habitat for Pillularia globulifera (Holmwood Common Pond) listed in the 1860 Surrey flora by Brewer. However, books this old are of little use when looking for the more conspicuous species, e.g. a plant of Osmunda regalis recorded by Brewer which measured 21 feet in circumference with fronds 7-8 feet high has long since disappeared. The one new flora in this area is "Flora of Hertfordshire" by Dony which runs on similar lines to Bowen's Berkshire book, although fewer localities are given.

E England Ferns are not often met with in any sort of abundance in East Anglia, although the Broads district of Norfolk does have a very rich fern flora, being the home of Dryopteris cristata which is quite abundant in some places. Fortunately, this area has been well covered by Petch and Swann's "Flora of Norfolk".

Midlands Several recent floras exist including Clapham's "Flora of Derbyshire" (1969) which is of much interest fern-wise. This is an excellent flora based on 1 km squares, and even makes the previous flora by Linton superfluous by listing all Linton's records separately, and records the recent addition of both Hymenophyllum wilsonii and Asplenium obovatum (billotii?) to the flora. Another well documented ferny county is Gloucestershire. Riddelsdell, Hedley and Price's flora of 1948 is well worth having, the quality of the book being reflected in its second-hand price of £10, the most expensive of all recent floras.

Wales In Wales there has been a slight resurgence in publishing recently with the result that both Carmarthen-shire and Merionethshire have had excellent leaflets published, and there is the promise of a new volume on the central Welsh counties. However, the most interesting county in the British Isles, Caernarvonshire, is covered inadequately; an old flora exists but it is out of date, very scarce, and inexplicit in its records - for example, Woodsia ilvensis is recorded for Beddgelert!! (I have only seen it on Moel yr Ogof). Throughout Wales the demand for county floras is to some extent lessened by the very excellent "Welsh Ferns" by Hyde, Wade and Harrison. After each species this book lists Welsh habitats, supported by herbarium sheets in the National Herbarium at Cardiff.

N England and Scotland Floras of this part of the country are unfortunately few and far between; this is particularly infuriating as this is where most of the alpines grow. There is a flora of Westmorland by Wilson, published in 1938 but this is a little disappointing as not much information in excess of Baker's "Flora of the English Lake District" is included (after a further 53 years botanising?!). To me the most interesting inclusion here is a photograph of Lycopodium annotinum growing abundantly on Bow Fell in Langdale. Information on the Scottish distribution of such rare species as Woodsia alpina, W. ilvensis and Cystopteris montana is sadly limited, one of the best sources of information I know of being Newman's "History of British Ferns" published in 1860 (!!), although reading between the lines of Walter's "Mountain Flowers" might lead to the discovery of some of these. Another useful source I have encountered is Dickie's "Botanist's Guide to Aberdeen, Banff and Kincardine" (1860). It includes localities for C. dickieana and C. montana which I hope soon to follow up.

Finally, on the national level "The Atlas of the British Flora" is indispensable, but it rarely helps in finding rare and local species; indeed it claims to confuse in the case of rarities.

SOUTHPORT FLOWER SHOW

By J W Dyce

Editorial policy has at last crystallised concerning the reporting of this, the country's most important exhibition of horticultural ferns, and I have the task of trying to condense the records for three years 1968, 1969 and 1970 to a size acceptable for the Newsletter. We have decided it is desirable to do this in order to preserve continuity, but a minimum of detail must perforce be given and anyone needing fuller information on any of the three years concerned can obtain this from the records in our files.

The usual judges, Messrs R Kaye and W G Mackenzie, officiated and I give a composite precis of their reports for the three years. On the whole the high standard which is expected at Southport was maintained, although with some difficulty each year because of hot and dry conditions during the summers and signs of scorch were evident on many plants which had been grown outdoors. Mr Kaye stresses the need to keep exhibition ferns to one crown to get good specimens, and he has some hard things to say of entries which are below standard - poor specimens shown, bad potting, dirty pots, and even some with weeds left flourishing in them; such entries cannot hope to win prizes. He laments that entrants in the fern classes seldom number more than the four or five stalwarts who support the Show year after year, and he wants to see many new names among the exhibitors to give added competition and stimulate all entrants to greater endeavours for high standards.

The 16 fern classes offer a large choice to exhibitors, from the first, a group of hardy British ferns to be arranged in a natural manner in an area not exceeding 100 square feet, to the last two, each for a single plant only. Mr Noel Brookfield continued to hold the Society's Silver Perpetual Challenge Trophy for his large group, and the variety and excellence of the ferns in his exhibits fully earned the award. In the next class, for a display of not more than 20 hardy British ferns on a ground space not exceeding 8 feet by 5 feet, both Mr Brookfield and Mr Bernard Hayhurst continued to put up superb exhibits with little to choose between them for premier place. Throughout most of the other classes their names again appeared in first, second or third places, with Mr N Robinson and Mr W W Howarth sometimes pushing in ahead of them. Other prize-winners were Lord and Lady Pilkington, Mr M Plowman and Mr R Trippitt.

The various classes bring to the show bench a very broad selection of fern varieties grown today. There are classes for six and for three hardy British ferns; six and three foreign ferns hardy in Great Britain; six greenhouse ferns; three Phyllitis; three Polypodiums; three Polystichums;

three Athyriums; three Dryopteris; three Gymnocarpium and/or Thelypteris; three Aspleniums; one British fern; and lastly one greenhouse fern. With all these classes to choose from, there is ample opportunity for the small grower with his few plants to compete successfully against the larger grower, and it is regrettable that more of our members do not take this chance to demonstrate how well they can grow ferns, and at the same time walk off with some of the very good money prizes offered, ranging from £25 to 15/-.

The Polystichums, Athyriums, Polypodiums and Phyllitis provided most of the outstanding plants, both in the large and small classes. Among them were Polystichum aculeatum 'Pulcherrimum Bevis', P.a. 'Pulcherrimum Gracillimum', P. setiferum 'Divisilobum Iveryanum', P.s. 'Acutilobum', Athyrium filix-femina 'Plumosum Druery', A.f. 'Superbum', A.f. 'Victoriae', A.f. 'Frizelliae', Polypodium vulgare 'Pulcherrimum', P.v. 'Cornubiense', P.v. 'Hadwinii', Phyllitis scolopendrium 'Crispum', P.s. 'Drummondii', and P.s. 'Ramo-cristata'. Among greenhouse ferns a popular one in several exhibits was Adiantum raddianum 'Kensington Gem', and in 1970 a large truly magnificent Platycerium alicorne, shown by Lady Pilkington, was undoubtedly the best fern specimen in the Show.

CONING IN EQUISETUM AND LYCOPODIUM

The recent paper by Jeffrey Duckett (Gazette 10(3):113) has stimulated me to ask members to observe marked colonies over a period of years and to record dates, and amount of coning and times of spore dehiscence. If climatic data can also be recorded at or near the site the data could be even more valuable. Forms for the recording of such data with further suggestions are available from myself or Mr J A Crabbe.

A C Jermy, British Museum (Natural History)

BRACKEN SURVEY

I would like to obtain data on the sporing of Bracken (Pteridium aquilinum) throughout the British Isles and would be grateful for dried (pressed) specimens giving locality (with grid reference) and habitat details. Preferably the second pinna from the bottom should be pressed whether sporing or not, together with a fertile pinna; the height of the plant should also be stated. There is a tendency in Bracken to form a "false" indusium, i.e. one under which no sporangia are formed, so a careful search should be made.

A C Jermy, British Museum (Natural History)

LIST OF FERN NURSERIES

NOEL BROOKFIELD, 102 Stamford Road, Birkdale, Southport, Lancashire	HARDY
THOMAS BUTCHER, Wickham Road Nursery, Shirley, Near Croydon, Surrey	MAIDENHAIR
HIGHFIELDS NURSERY, Caldecote, Cambridge	HARDY
HIGHLANDS WATER GARDENS, Rickmansworth, Herts	HARDY
HILLIER AND SONS, Winchester, Hants	HARDY
W E TH INGWERSEN LTD, Birch Farm Nursery, Gravetye, East Grinstead, Sussex	ALPINE
REGINALD KAYE LTD, Waithman Nurseries, Silverdale, Carnforth, Lancs	HARDY
LOCHHALL NURSERY, 21/23 Kirk Street, Stonehouse, Larkhall, Lanarkshire	HARDY
NEWLAKE GARDENS, New Chapel Rd, Crawley, Sussex	HARDY
NORGAARDS STAUDER, Hovedvej 10, Lilballe, 6030 Bramdrupdam, Denmark	HARDY
PERRYS HARDY PLANT FARM, Theobalds Park Road, Crews Hill, Enfield, Middlesex	HARDY
PROUDLEY'S HEATHER NURSERY, Two Bridges, Blakeney, Glos	HARDY
SUNNINGDALE NURSERIES, Windlesham, Surrey	HARDY

SPORE AND PLANT EXCHANGES

Members wishing to exchange spores and plants will find the Newsletter a useful medium for this purpose, and all offers and requests will be printed in the issue following their receipt. Subsequent correspondence must be between the interested parties direct, and not via the Secretary.

The American Fern Society Spore Exchange requires spores of all kinds, and their list of those available can be obtained from the organiser, Mr Neill D Hall, 1225 NE 95th Street, Seattle 15, Washington, USA.

The University of Hull Botanic Garden issues a list of seeds and spores offered for exchange, obtainable from the Assistant Curator, Botanic Garden, Department of Botany, The University, Hull HU6 7RX, England.

The following overseas members are interested in the exchange of spores -

Mrs E S Bayley, Danbury Park, Postbox 21 MR, Marlborough, Salisbury, Rhodesia.

Mr G Kunkel, Camino Viejo 9, Tafira Alta, Las Palmas de Gran Canaria, Canary Islands.
Mrs Sylvia Leatherman, of the Los Angeles International Fern Society, 2637 North Lee Avenue, South el Monte, California 91733, USA.
Mrs Nancy M Sherlock, 590E Kings Road, North Vancouver, B C, Canada.
Miss K H Stocker, Mapua, Via Nelson, New Zealand.
Rev Philip F Tilghman, PO Box 12, Nambucca Heads, New South Wales, Australia.

PROPOSED B P S SPORE EXCHANGE

For some time the possibility of starting a Spore Exchange has been considered, and now one of our members, Mr David Russell, 20 York Avenue, Stanmore, Middlesex, has agreed to organise such an exchange and take complete charge of it. He will arrange for the receipt of spores from members and other sources and sell them at a modest price to defray all expenses incurred and help augment the Society's funds. When it becomes established he will issue lists of spores held and those wanted, and will also act as a go-between for members wishing to acquire plants and those with surplus stocks of sporelings and other material for disposal. A charge will be made for this service.

We appeal to all members who grow fern varieties and species to contact Mr Russell at his above address and make arrangements to supply him with spores and surplus plants. Until lists of stocks held in the Spore Exchange can be circulated with the issues of the Gazette and Newsletter, members wishing to make purchases should make their wants known to Mr Russell; the first list will be sent out with the Newsletter in November next year.

The Spore Exchange can be a very useful and valuable addition to the services offered by the Society, and we hope that all who can will do their utmost to ensure that it is a success. As it must be self-supporting as far as possible in its early days, can we ask if members writing to Mr Russell will kindly enclose stamped addressed envelopes when replies are expected.

SLIDE LIBRARY

The Society is endeavouring to build up a Slide Library, and members are invited to send slides, either in colour or black-and-white, to Mr R F Cartwright, 143 Pittman's Field, Harlow, Essex, accompanied by some relevant information about them. Most 35mm photographers play safe by taking duplicate shots - please send your unwanted spares to us.

IMPORTANT NOTICE - Postage on Correspondence

The volume of correspondence handled by the Secretary and other officers has increased greatly over the past few years and our outlays for postages are increasing all the time, in keeping with other expenditure. As postal rates are going to be increased again soon, we agreed at our last Committee Meeting to suggest to members that when replies to letters are required, they may care to ease the burden somewhat by enclosing stamped addressed envelopes, or preferably stamps only, since some replies need larger envelopes. A few members are already doing this, and we shall be very grateful to others who adopt the practice.

READING CIRCLE

For the information of our newer members, we have a Reading Circle which circulates the American Fern Journal among those interested. This is issued quarterly, and contains much valuable information for those seriously interested in ferns. Please advise the Secretary who will add your name to the list.

WANTED

Back issues of the British Fern Gazette, and old fern books

Members with old Gazettes or fern books for which they have no further use, are invited to present them or sell them to the Society. There is always a demand for old fern books from new members, and if you are considering disposing of yours please give us the opportunity to acquire them.

EARLY ISSUES OF THE BRITISH FERN GAZETTE

The first five volumes of the British Fern Gazette have been reprinted by a modern photographic process, and complete sets from Volumes 1 to 9, also separate issues, are available from the Secretary who will supply particulars. The early volumes deal chiefly with the variations of the British ferns, and are written very largely by C T Druery, and later, by Dr F W Stansfield, both outstanding authorities in this field.

MEETINGS CARDS FOR 1971

Small printed cards containing the 1971 Meetings Programme have been prepared for convenient ready reference purposes, and are being sent out with this Newsletter to all inland members. Any overseas member, visiting Britain, can obtain one on application to the Meetings Secretary.

BOOK REVIEW By J A Crabbe

"The Shell Natural History of Britain", general editor Maurice Burton, 481 pages, 64 colour plates, over 300 black-and-white illustrations. Michael Joseph in Association with Rainbird Reference Books, London, 29 June 1970. Price 50 shillings (pounds 2.50).

This, despite some possible ambiguity in the title, is a general natural history of Britain bearing the Shell Company's name and trade-mark. Shells and their inmates are talked about and illustrated in the Invertebrates and Sea-shore chapters. Of particular interest to the British Pteridological Society, ferns are described in the botanical scene by a well-known botanist and biogeographer (Francis Rose). Animals are treated by a team of leading experts (T B Bagenal, fishes; Michael Chinery, invertebrates; Richard Fitter, mammals; Alfred Leutscher, amphibians and reptiles; Kenneth Williamson, birds; Sir Maurice Yonge, sea-shore) and the whole volume is edited by a naturalist of great dedication and long experience.

Only about a quarter of our native British Pteridophytes are included but, as Maurice Burton says in his Introduction, 'it becomes very much a matter of squeezing more than a quart into a pint pot', even though Francis Rose is allowed nearly a third of the book for his masterly essay on the plant geography of Britain.

Among the 17 pteridophytes included, one could have wished for some mention of complex problems existing in, for example, Dryopteris dilatata and Polypodium vulgare. The colour pictures are not sufficiently precise for certain identification and that of Lycopodium clavatum on page 17 is misleading. The line drawings could have been less ambiguously stylised and more detailed.

Nevertheless, this is a most excellent book. The plant section constitutes a marvellously accurate and descriptive biogeographic supplement to our existing taxonomic treatments.

GARDENS TO VISIT

The Gardeners' Sunday Organisation publishes annually a booklet listing the gardens which are opened to the public in aid of the Gardeners' Royal Benevolent Society and the Royal Gardeners' Orphan Fund, and may be visited during the year from March to October. The 1971 edition of the booklet entitled "Gardens to Visit", can be obtained through W H Smith's or Wyman's bookstalls for 1/6, or direct from the Organiser, Mrs K Collett, White Witches, Claygate Road, Dorking, Surrey, for 2/- post free.

NEW MEMBERS AND SUBSCRIBERS

ASTLEY R P, 105 Sydney Road, Raynes Park, London SW 20
BENL Dr Gerhard, FLS, Botanische Staatssammlung Munchen, Menzinger Strasse 67, 8000 Munchen 19, Germany
BOTANIC GARDEN OF THE FREE UNIVERSITY, Van der Boechorststraat 8, Amsterdam-Buitenveldert, Holland
BOTANICAL INSTITUTE, CZECHOSLOVAKIAN ACADEMY OF SCIENCES, Pruhonice u Prahy, Czechoslovakia
CASTELLAN, Mrs M L, The Lane Cottage, Wootton, Ellastone, Near Ashbourne, Derbyshire.
CATLIN Mrs K M, The Beeches, Standon, Near Stafford.
CONNECTICUT UNIVERSITY, Serials Dept, W Cross Library, Storrs, Connecticut 06268, USA.
DAVIES Miss Sheila M, 100 Hambalt Road, London SW 4
DEMETER AND COMPANY LTD, P O Box 208, Parklaan 11, 9000 Ghent, Belgium
EAVES Miss Valerie A, The Garden House, Great Eccleston, Preston, Lancashire.
FEARNLEY J M, 31 Crawford Avenue, Leyland, Preston, Lancs
GLASGOW UNIVERSITY, The Library, Glasgow W 2
GREEN Mrs E M, Venus Cottage, Aldham, Colchester, Essex
JONES J D, Bodlondeb, 3 Queen's Walk, Rhyl, Flintshire
KAVLIE-JORGENSEN Dr Einar, 5200 Os, Norway
KILSHAW A E G, 54 Cumberland Road, Sale, Cheshire
LORAINE Mrs Joan, Greencombe, Porlock, Somerset
MATTHEWS Mrs V C, Moat House, Chignal St James, Near Chelmsford, Essex
McLACHLAN Duncan, Lochhall Nursery, 21/23 Kirk Street, Stonehouse, Larkhall, Lanarkshire
MITCHELL Dr Fern Wood, and Mrs Esther, 3834 Fulton St N W, Washington, D C 20007, USA
MYNKANTAS J, R R 1, Cobble Hill, B C, Canada
OELLGAARD Benjamin, MSc, Heibergsgade 25 pt, 8000 Aarhus C, Denmark
PIGGIN Stirtevant R, Flat 5, Cyprus Lodge, Cyprus Road, Nottingham
PROUDLEY Brian W, Proudley's Heather Nursery, Two Bridges, Blakeney, Gloucestershire
SAMAT BIN ABDULLAH Abdul, Fakulti Sains, Universiti Kebangsa'en, Jalan Pantai Baharu, Kuala Lumpur, Malaysia
SCOTT A H A, 31 Windrush Way, Hythe, Southampton
SHAW Mrs Elaine, Casilla de Correo 19, Cordoba, Argentina
SHERLOCK Mrs Nancy M, 590 E Kings Road, North Vancouver, B C, Canada
SMITH C J E, 128 Averil Road, Leicester
SMITH W A, 226 Union Grove, Aberdeen
STEVENS Mrs K M, 18 Cambrian Road, Tywyn, Merioneth

THOMPSON Rev J C, The Rectory, Winterbourne, Stickland, Blandford, Dorset
UNETT Major R, 105 Philbeach Gardens, London S W 5
WEGLICKI Mrs Cynthia C, 126 Sewall Avenue, Brookline, Massachusetts 02146, USA
WILMANNS Prof Dr Otti, Botanisches Institut der Universitat, Schanzlestrasse 9/11, 78 Freiburg im Breisgau, Germany
WILSON I D, Constable Corner, Ben Rhydding Road, Ilkley, Yorkshire
YUILLE Mrs S, 20 Wastwater Rise, Seascale, Cumberland
ZANONI Thomas A, Dept of Botany, Rutgers - The State University, New Brunswick, New Jersey 08903, USA

FERN HOLIDAY ACCOMMODATION

Suitable holiday accommodation is often difficult to obtain, and we are very pleased to advise that two of our members are offering this facility to members wishing to visit two of the most fern-rich parts of the country, the Lake District and Devon.

Mrs A Jackson, Knotts View, Stonethwaite, Borrowdale, Keswick, Cumberland, has re-opened the home of her father-in-law, Mr Fred Jackson, as a guest house in this most beautiful part of the Lake District, and a special welcome will be given to members of the Society. As the amount of accommodation is limited, and the area is an extremely popular one for holiday-makers, application should be made to Mrs Jackson as soon as possible.

Mrs E M Borup, 30 Earls Court Square, London S W 5, has a small house at Sticklepath (Belstone), South Zeal, Devon, 18 miles west of Exeter and 3 miles from Okehampton. She lives there from time to time, but there are periods when members could use it, to be self-catering; it has four beds, bathroom and electricity. The house is situated on high ground above the village, with buses close by, plenty of level car parking space, and adjacent to some of the finest parts of Dartmoor. Views extend to Exmoor and, in the winter, to South Wales. Fuller information can be had from Mrs Borup.

PLEASE COMPLETE AND RETURN AS SOON AS POSSIBLE
AND NOT LATER THAN MID-MARCH 1971

To: Mr A J Worland, 5 Fen Road, Cambridge CB4 1TU

I hope to attend the meetings marked 'X' below. Please advise any further information I require, when available.

(NOTE - At the end of March 1971 all members who have sent in their forms will be advised full details of all the meetings with names of other interested members. It is pointed out that the date mid-March for the return of forms is to assist the Meetings Secretary to finalise arrangements, and does not prevent members from sending in their names at a later date.)

BEFORE FILLING IN THE FORM PLEASE READ THE NOTES BELOW, AND ALSO THOSE APPENDED TO THE MEETINGS PROGRAMME

NOTES FOR PASSENGERS

Lifts cannot be guaranteed to and from venues.
You will be advised of car-owners, if any, living near you, and all enquiries must be made direct, enclosing STAMPED ADDRESSED ENVELOPES for replies.
You are expected to share expenses with car-owners

Mark 'X'			Members with cars		Members without cars	
			No. of spare seats available for passengers		Making own travel arrange-ments	Would like lift to and from venues
			to and from venues	during meet-ings		
	1	Guernsey 17/24 April				
	2	Fern Houses, Kew 22 May				
	3	Devon 4/6 June				
	4	Dr Wacher 12 June				
	5	Essex 20 June				
	6	Botanical Gardens Cambridge 26 June				
	7	Staffordshire 2/4 July				
	8	Yorkshire 16/18 July				
	9	Boston 7 August				
	10	Grasmere 20/22 August				
	11	Mid-Wales 28 Aug/4 Sept				
	12	East Anglia 17/19 Sept				
	13	Wye Valley 1/3 Oct				

NAME .....

ADDRESS .....

.....

.....

THE BRITISH PTERIDOLOGICAL SOCIETY

MEETINGS PROGRAMME FOR 1971

Saturday 20 February

Indoor Meeting at the British Museum (Natural History), Cromwell Road, London S W 7, from 3 pm.
Talk by A C Jermy on "Ferns of the Malaysian and Pacific Islands". Followed by discussions and conversazione extending into the evening. Buffet meal available.

Saturday/Saturday 17/24 April

Week Meeting on the Isle of Guernsey.
Leader - H L Gabe
Centre - Not yet arranged
Travel - B R ferry service from Weymouth
Air by B E A from London, Birmingham and Manchester.
Information from - Secretary, STATES TOURIST COMMITTEE, GUERNSEY.
On Guernsey, hired cars will be necessary for transport; shared cost should not exceed £4 each. Inform Meetings Secretary if prepared to act as a chauffeur.
(IMPORTANT - SEE ALSO NOTE 5)

Saturday 22 May

Visit to the Fern Houses at Kew Botanic Gardens. Meet at 2 30 pm outside the Fern Houses.

Friday/Sunday 4/6 June

Weekend Meeting in Devon.
Leader - Peter Corbin
Centre - Tavistock
Details to be arranged

Saturday 12 June

Visit to the garden of Dr H S Wacher.
Meet at 97 St Stephen's Road, Canterbury, Kent, at 2 30 pm.

Sunday 20 June

Day Trip to Essex.
Leader - Miss V Green
Meet at Bullbanks Farm, Halstead Road, Aldham, Near Colchester, at noon.
NOTE - A sketch map of the meeting place can be obtained from the Meetings Secretary

Saturday 26 June	Visit to the Botanical Gardens, Cambridge. Meet at the Trumpington Road (A10) entrance to Gardens at 2 pm. This meeting will be followed by a visit to Dernford Fen near Cambridge. Leader - A J Worland.
Friday/Sunday 2/4 July	Weekend Meeting in Staffordshire. Leaders - Mrs M L Castellan and Miss M M Kingston Centre - The Sunnyside Hotel, Mayfield, Nr Ashbourne, Derby. Tel: Ashbourne 2249 NOTE - Early booking is advised
Friday/Sunday 16/18 July	Weekend Meeting in Yorkshire. Leader - J W Dyce Centre - Golden Lion Hotel, Duke Street, Settle, Yorks. Tel: Settle 2203
Saturday 7 August	Day search for <u>Equisetum ramosissimum</u> Leader - Eric Simpson Meet at Railway Public House, London Road, Boston (A16) at 12 30 pm NOTE - A sketch map of the area showing the meeting place can be obtained from the Meetings Secretary
Friday/Sunday 20/22 August	Weekend Meeting at Grasmere, Westmorland. Leader - Fred Jackson Centre - Travellers Rest, Grasmere, Westmorland. Tel: Grasmere 378
Wednesday/ Friday 25/27 August	Southport Flower Show. Many fern classes showing a fine selection of the best varieties. The Society has a Stand in the Specialist Societies Tent.
Saturday/ Saturday 28 August/ 4 September	Annual Excursion in Mid-Wales. Leader - J W Dyce Centre - Pencerrig Country House Hotel, Builth Wells, Breconshire, Wales. Tel: Builth Wells 3226
Wednesday 1 September	The Annual General Meeting to be held at the Pencerrig Country House Hotel, Builth Wells, at 8 pm

Friday/Sunday 17/19 September	Weekend Meeting in East Anglia Leaders - M H Rickard and A J Worland Centre - The Wherry Hotel, Oulton Broad, Suffolk. Tel: Lowestoft 5019
Friday/Sunday 1/3 October	Weekend Meeting in the Wye Valley Leader - Lt Col P G Coke Centre - Royal George Hotel, Monmouth. Tel: Monmouth 2310
Saturday 20 November	Indoor Meeting at the British Museum (Natural History), Cromwell Road, London S W 7, from 3 pm. Talks, discussions and conversazione continuing into the evening. Buffet meal available.

WILL ALL MEMBERS ATTENDING ANY OF THE FIELD MEETINGS PLEASE READ THE FOLLOWING NOTES, ALSO THOSE ON THE MEETINGS FORM

NOTE 1 With the exception of the Annual General Meeting, further necessary information regarding the meetings will be advised only to members who complete and return the Meetings Form (attached) to the Meetings Secretary. (GUERNSEY - SEE NOTE 5)

NOTE 2 Members must make their own accommodation arrangements, but we hope to be able to supply some information concerning available accommodation, ie hotel, boarding house, farmhouse, bed and breakfast addresses, and camping sites in the area, for most of the meetings.
APPLY TO THE MEETINGS SECRETARY.

NOTE 3 Weekend meetings commence on the Friday evening to allow an early start to be made on the following morning. Members unable to arrive on the Friday evening, and wishing to join the Saturday and/or Sunday meetings, should advise the Meetings Secretary or the Leader beforehand, and should be at the meeting place before 9 30 am. While every endeavour will be made to do so, we cannot guarantee to leave sufficiently explicit directions to enable late-comers to follow on and make contact.

NOTE 4 Private car transport will be used, except for the meetings at Kew and on Guernsey. Please mark the Meetings Form accordingly.

NOTE 5 As the Guernsey Meeting is being held so early in the year and definite arrangements concerning transport on the island have to be made in good time, the date mid-March stated on the Meetings Form will be too late, and all those coming must advise the Meetings Secretary as soon as they can possibly do so.

APPOINTMENT OF NEW MEETINGS SECRETARY

Since the Meetings Programme was enlarged in size, Mr R F Cartwright and the Secretary have undertaken the work of organising all the meetings. Mr A J Worland, 5 Fen Road, Cambridge CB4 1TU, has now taken over the job and is doing excellent work, as will be seen from his 1971 Programme, published herewith. We hope all members who attend meetings will give him their full support and help to make his task as light as possible.

It is also appropriate here for the Secretary to express his grateful thanks to Dick Cartwright for the willing support given to him in helping to get our fuller Meetings Programme launched and established successfully.

WORLD FERN SOCIETIES

For the information of members who are interested in the ferns of other countries, we give a list of fern societies known to us. If others exist, the Secretary will be glad to have information about them.

AMERICAN FERN SOCIETY Correspondence C/o Smithsonian Institution, Washington, D C, USA.

LOS ANGELES INTERNATIONAL FERN SOCIETY Wilbur W Olson, Membership Chairman, 13715 Cordary Avenue, Hawthorne, California 90250, USA.

JAPANESE PTERIDOLOGICAL SOCIETY Correspondence C/o Dr K Iwatsuki, Dept of Botany, Faculty of Science, Kyoto University, Kyoto, Japan.

THE NIPPON FERNIST CLUB Secretary, Mr Tomitaro Namegata, 481 Narita, Narita-shi, Chiba-ken, Japan 286.

NELSON NEW ZEALAND FERN SOCIETY Correspondence C/o Miss K H Stocker, Mapua, Via Nelson, New Zealand.

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Published by the British Pteridological Society

THE BRITISH PTERIDOLOGICAL SOCIETY

Newsletter No 9

November 1971

SECRETARY
J W Dyce
46 Sedley Rise
LOUGHTON Essex

NEWSLETTER NO 9 NOVEMBER 1971

EDITED by
The Secretary J W Dyce

EDITORIAL

Some months ago I read an article in one of the botanical or gardening papers, and although I noted it with interest at the time I am now unable to find it again in spite of repeated search. The details are exasperatingly vague in my mind, but the gist was that a certain plant was now spontaneously showing new breaks of a similar character in different parts of the country, and the writer was making the suggestion that suitable conditions of an unknown nature for triggering off such happenings in the plant world come round in cycles. This led me to ponder anew our old, old problem of fern variation and its seeming disappearance in the wild. In the heyday of the fern cult 60 to 100 years ago, the finding of good varieties seemed to be a comparatively commonplace occurrence, and the vast majority of good ferns we grow today all originated during this period. Then they disappeared, and no amount of hunting in the areas which in the past were rich in variation, could produce a single variety worth the name. Now, we are finding more again, although not very many yet, so can there be some truth in the suggestion that suitable conditions come in cycles? Perhaps we are on the threshold of another variation epoch, in which case our Society will be in at the beginning this time and not at the end!

After disposing of last year's issue of the Newsletter I relaxed with a sigh of relief and the thought that, for some time at least, I could forget about newsletters, but in the words of Omar Khayyam -

"The Bird of Time has but a little way
to fly - and Lo! the Bird is on the Wing".

But however quickly the time has passed, it has been packed with activity in the Society, and with happy events and sad events, so there is much to narrate in the following pages. Also, I have managed to persuade some members to contribute papers, but more are badly needed with fresh outlooks to keep our Newsletter varied and interesting. Again, Bert Bruty imparts some of his expert know-how on the culture of indoor ferns, and I am pleased to welcome Reginald Kaye to our pages. His masterly book "Hardy Ferns" could not possibly contain all his vast store of fern knowledge and I hope that over the years, through the medium of the Newsletter, much more of it will be committed to paper so that it can be preserved for posterity. Another new writer with much useful information to impart, is Henry Schollick. He has gathered

together a very fine large collection of hardy ferns, but I sometimes wonder which he finds the more absorbing - his fern books or his fern plants! As a bookseller-publisher he knows his way among books, and his paper on the subject will be most helpful to many of us. To widen our horizons comes Edith Bayley from Rhodesia, who like many of us, finds ferns a fascinating hobby. Her letters to me are full of interest and information about her local ones, and I am very pleased to include a contribution from her to these pages.

A new departure is the inclusion here of the Annual Excursion report. We consider that as the Newsletter is now firmly established as one of our publications, it is more appropriate than the Gazette to carry this narration which can take its place along with the records of the other meetings.

REMINDERS AND INFORMATION BRIEFS

SUBSCRIPTIONS became due on 1st July - have you paid yours? If not, the Treasurer will be glad to receive it (£1.25) as soon as possible.

SUBSCRIPTION RECEIPTS - To help reduce postal expenses which are becoming prohibitive, receipts will not be sent out separately in future (unless specially asked for and a stamp sent to cover postage), but will instead be sent with the first following communication or publication.

POSTAGES - In our last Newsletter we asked that, in view of the greatly increased postal charges, members will ease this burden somewhat by enclosing stamps (preferably stamps, not stamped addressed envelopes) when replies to letters are required. We repeat this request and shall be grateful if members will make a special note of it.

MEETINGS CARDS 1972 - Printed programme cards for the 1972 meetings are enclosed with this Newsletter to all inland members. Overseas members, visiting Britain, can obtain them on application to the Meetings Secretary.

NEW FERN NAMES - During the past year two fern name changes have come into common use, and as they will be used in the articles in this issue, to avoid confusion in the minds of any members who are unaware of the changes, I mention them here - Thelypteris limbosperma is now named Oreopteris limbosperma, and Thelypteris phegopteris is now Phegopteris connectilis.

Two further changes have been made, since the botanists have now decided that Ceterach officinarum and Phyllitis scolopendrium are to return to the genus Asplenium to which they formerly belonged. The new names are Asplenium ceterach and Asplenium scolopendrium, but I have continued to use the old names in this issue of the Newsletter to avoid a surfeit of change - we poor growers already have enough to digest for one year with the changes I have used!

FINANCIAL STATEMENT AS AT 30 JUNE 1971

ORDINARY ACCOUNT

1969/70	1970 30 June			£	£	1969/70		£	£
		To Balance			212.24	£ 53	By Payment to Devonshire Press Ltd - Reprints Gaz. V 10 pt 3		29.68
£389		Subscriptions			417.57				
6		Donations			5.12		Payment to Metloc Secretarial Services -	£	
		Sales -		£		45	Newsletter No 8	57.53	
		Gazettes and				-	Minutes, Notices and Labels	6.88	64.41
133		Newsletters		297.19			Subscriptions -		
30		Reprints		11.13		5	Council for Nature	5.05	
2		Sundry		1.43	309.75	3	Royal Horticultural Soc.	3.15	8.20
24		Interest on Deposit Account			30.40	8	Printing and Stationery		12.63
		Sundry Debtors -				41	Secretarial and editorial postages and expenses		42.20
74		Due for reprints (Gaz. V 10 pt 3)			21.00	-	Donation to Arnside Link Road Fighting Fund		5.00
						3	Fees to British Museum (Natural History) for meeting accommodation		9.40
						-	Outlays at Southport Flower Show Stand		6.00
						125	Transfer to Publications Account		250.00
						398	Sundry Creditors - Devonshire Press Ltd for Gaz. V 10 pt 4 - ESTIMATED		380.00
							BALANCE AT 30 JUNE 1971 ESTIMATED		188.56
					£ 996.08				£ 996.08

1971 30 June		£
	To Balance - ESTIMATED	188.56

PUBLICATIONS ACCOUNT

1970		£			£
30 June	To Balance	517.00			
1971			1971		
30 June	Transfer from Ordinary a/c	250.00	30 June	By BALANCE AT 30 JUNE 1971	767.00
		£ 767.00			£ 767.00

1971		
30 June	To Balance	£ 767.00

THE ANNUAL GENERAL MEETING

This year the Meeting was held during the Annual Excursion at Builth Wells in Breconshire, but the small attendance suggests that it is time to reconsider our policy of holding these Meetings every other year at the excursion centre, and revert to our former practice of holding them every year in London where we are assured of a large representative attendance of members.

The Secretary reported on an active year, during which we have started a Spore and Plant Exchange, and have begun to co-operate with the Capel Manor Horticultural Centre at Waltham Cross, administered by the London Borough of Enfield, in the formation of a collection of hardy British and foreign ferns and fern varieties. We have supported the Lake District Naturalists Trust in the fight against a new road proposed for Arnside/Silverdale area, which would do much damage to this district, rich in plant and animal life. Geoffrey Gilbert's scheme for the repopulation of Hampstead Heath with its lost indigenous plant life, has also been given support, and we have offered to help with guidance, if this should be required, on the choice of suitable ferns to be incorporated in the replanting.

Membership continues to rise and we had an intake of 50 new members and very few losses. There have been two deaths, P Greenfield our Grand Old Man whose obituary appears in the recently published Gazette, and H J Marchant of New Zealand who died suddenly in London this summer during a visit to this country. Another just advised, is Mrs M Elicker of USA.

The President, Professor Irene Manton, was elected for her third term in the Office, and the five Vice-Presidents were re-elected en bloc. The vacancy caused by the death of P Greenfield was left unfilled. We express our thanks to Bert Bruty and Bill Wright, the retiring Committee members, for all their work on our behalf, and welcome two new members, Chris Page and David Russell, who were elected to fill the vacancies. The other officers were re-elected with the addition of Dr Barry Thomas as an Assistant Editor.

The Treasurer's Report showed that we are still in a solvent position, although our balance on hand has been reduced (see Financial Statement). We have done well on the sale of old Gazettes and transferred £250 of the proceeds to the Publications Fund, now standing at £767. The cost of the Newsletter has increased, but we have managed to keep our running costs down very well. Fees for indoor meeting accommodation have increased, but now the Museum charges have increased to an even higher figure, and for this reason we have had to seek other accommodation at the Chelsea Physic Garden for this year's winter meeting. At the time of writing, the venue for next year's indoor meetings has not been decided, although I hope it will be fixed in time for inclusion in the Meetings Programme in this issue. No costs were incurred this year at the Southport Flower Show Stand, apart from a fee of £5 which is now asked by the Show Committee. The delay in publishing the Gazette which we hoped would be out much earlier, has necessitated showing an estimated cost, and the final balance, therefore, is also provisional.

MEETINGS 1971

Our new Meetings Secretary, Tony Worland, provided us with a good programme for his first year in office, and the meetings, on the whole, were well attended and successful. At the Spring indoor meeting held on 20th February at the British Museum (Natural History), we enjoyed our usual get-together with a buffet meal, and Clive Jermy talked on his expedition to Java and New Guinea, illustrated by colour slides. He described the ferns and places seen in a simple non-botanical manner which held our interest and was very much enjoyed by everyone present. I am unable to report on the Autumn meeting which is being held after the publication date of this Newsletter. Our annual visit to the Fern Houses at Kew did not attract so many members this year. Bert Bruty has now retired from his post as foreman-in-charge of the Houses, and has been succeeded by John Woodhams who is young and enthusiastically keen on the ferns in his charge. Along with Professor Holttum, he led us round and showed himself already so familiar with the many ferns that we feel Bert's mantle has fallen on worthy shoulders. Garden visits were paid to Dr H S Wacher of Canterbury and to the Royal Botanic Gardens at Cambridge. We expected a large attendance to see Dr Wacher's garden which contains a large selection of interesting ferns as well as other plants, many of them collected personally during Continental holidays. Only four members turned up which was most disappointing for both us and our host. At the Botanic Gardens we were able to see many ferns, both species and varieties, and one particularly instructive planting was the three Polypodies, P. australe, P. interjectum and P. vulgare growing side by side, which enabled us to note very clearly the differences in the three species. After leaving the Gardens, some of us went on to Dernford Fen near Cambridge; no ferns were seen and only one horsetail, but the sight of several plants of the Bee Orchis, Ophrys apifera, was ample compensation.

DAY MEETINGS

Essex 20 June A party of 11 met at Aldham near Colchester, and Vivien Green led us to several fern areas in the district. Both Polystichum setiferum and P. aculeatum which are rare plants in Essex, were seen, the former a colony of many plants including the minor variety 'Decompositum'. On some heathland, small plants of Osmunda regalis were visited and near them grew Blechnum spicant and Oreopteris limbosperma, all of them uncommon ferns for this county, as was Asplenium trichomanes growing on an old brick wall. A good colony of Ophioglossum vulgatum was shown to us, due to some good work done by our leader in following up an old record of about 100 years ago in Gibson's Flora of Essex.

Equisetum ramosissimum search 7 August The report of this meeting passed on to the Secretary who was unable to attend, was very brief - on a very wet day only 4 members turned up and the equisetum was not found!

WEEKEND MEETINGS

Tavistock, Devon 4-6 June Peter Corbin led this meeting, very much centred on Dartmoor, with an attendance of 7 members and friends. Moor-

land areas were covered, and also woodland along the Rivers Dart and Teign. On the Moor, on Saturday, we were shown the solitary one plant of Cryptogramma crispa found by Peter some years ago on some ruined buildings. There is only one other record for this fern in the south-west. Osmunda regalis was seen in plenty in the Dart valley, and we found Phegopteris connectilis still flourishing - and spreading - on Cox Tor, but unfortunately, on this tor we could not find the Hymenophyllum wilsonii which would seem to have become a victim of the two very dry summers experienced in the area. On Sunday the extensive Meldon Quarries provided some hours of good hunting, and a few additions to those found in 1969 brought the list up to 15 species, but the Ceterach officinarum which in 1969 was very large-growing, was also a victim of the dry conditions and much of it was completely dried up. Fortunately, this fern has built-in protection against drought and, no doubt, will be as good as ever when conditions improve. Later in the day at Fingle Bridge we discovered a large colony of Dryopteris X deweveri, the hybrid between D. austriaca and D. carthusiana. A visit to the ruined Gidleigh Castle was a break from hunting, but in the grounds we noted a very fine O. regalis with very upright fronds, pink stalked at their apices.

Staffordshire 2-4 July Under the leadership of our local member Mrs Marjorie Castellan, this meeting centred at Mayfield near Ashbourne, proved to be most interesting for the few of us who attended. Very little attention has been given to the ferns of the area, and among the 22 ferns and allies we found, 5 were new records for the Atlas of the British Flora and 5 were confirmations of old pre-1930 records. In Dydon Wood a scramble up the muddy bed of a stream showed us a good selection of woodland ferns, among them Polystichum aculeatum, P. setiferum and Gymnocarpium dryopteris. On limestone outcrops near Swinscoe the small lime-loving ferns were abundant - Asplenium adiantum-nigrum, A. ruta-muraria, A. trichomanes, Cystopteris fragilis and Phyllitis scolopendrium, with P. aculeatum in the shady areas lower down the slopes which were gay with the yellow flowers of the rockrose, Helianthemum chamaecistus. On Sunday, Gymnocarpium robertianum was seen in quarries near Caldonlow, followed by a visit, disappointing fern-wise, to Hawksmoor Wood Nature Reserve. Some good fern varieties were noted, however, in the garden of the Reserve warden. During the afternoon a short visit was paid to the Ilam district before the meeting broke up.

Settle 16-18 July This was a very good meeting with 10 members present. Most of the time we were on the limestone pavements which are always exciting for hunting, since the many grikes, narrow and wide, some deep and some shallow, contain a wealth of ferns, and one never knows what will be found. On Saturday we visited Oxenber Wood near Feizor, and the limestone ferns were there in abundance, including Dryopteris villarii and Gymnocarpium robertianum. One good variety, Phyllitis scolopendrium 'Ramosa', was found in a grike by Martin Rickard. Again, as last year, we visited the old railway cutting near Ribbleshead Station, where many interesting plants, not only ferns, flourish and we do not tire of re-visiting this place. This year we added some new species to our recorded list, Asplenium adiantum-nigrum, our only record for the whole

area, A. viride, Dryopteris austriaca, Polypodium interjectum and Botrychium lunaria. In all, a total of 17 fern and allied species have been found in this small area. An old find of A. septentrionale, high on Ingleborough, by Margaret Butterfield as a schoolgirl, long before she was actively interested in ferns, led some of our more active members to climb in search of it but they were not successful. The deep Ingleton Glen, a different kind of country, was explored on the Sunday, and in this rich habitat we made an exciting list of 21 species. The limestone ferns and the large woodland ones abounded, but one recorded fern, Hymenophyllum wilsonii, we did not see, nor could we find Equisetum hyemale which used to grow here and would appear to have been buried during extensions to the car park adjoining the river. We finished the day, and the weekend, with a visit to see the splendid fern collection of Mr James Lord in Austwick. The beauty of the many good varieties was an "eye-opener" to some of our newer members. A selection of fronds was kindly gifted by Mr Lord for the Society herbarium.

Grasmere 20-22 August We were only 4 in number for this meeting led by Fred Jackson. On the Saturday and Sunday we explored Greenhead Gill and Easedale, both near to Grasmere, finding 15 species, notably, abundant Ceterach officinarum and spleenworts in plenty on walls around the village, and Cryptogramma crispa, Phegopteris connectilis and Hymenophyllum wilsonii in the gills. In boggy ground at the head of Rydal Water were some extensive colonies of Dryopteris carthusiana. On Saturday afternoon we travelled further afield to Borrowdale to see Fred's grand collection of species and varieties, and we also paused to view, over the wall, the remains of the once well-known Askew collection at Grange. The Secretary extended his stay over the Monday when good fern country at the head and on the west of Thirlmere was explored with Fred Jackson. The area was found to be rich in the finer ferns, such as Asplenium viride, Cystopteris fragilis, Gymnocarpium dryopteris, Hymenophyllum wilsonii, Phegopteris connectilis and Polystichum aculeatum. It has been noted for attention during future visits.

East Anglia 17-19 September Centred at Oulton Broad, 7 members enjoyed this meeting in perfect weather. Led by Martin Rickard and Tony Worland we visited the Horsey and Winterton-on-Sea dune area to introduce newer members to Dryopteris cristata and D. X uliginosa, both of which were found, as well as Osmunda regalis and Ophioglossum vulgatum, while D. carthusiana was a common fern in most places. The Secretary also found on the dunes and collected a plant of a very good double heather, Calluna vulgaris, in a fine shade of pink. Sunday was devoted to Fritton Decoy, a stretch of water in extensive private woodlands, owned by Lord Somerleyton from whom we had a permit to hunt the grounds. They proved to be very disappointing, ferns being very few in number. Only D. austriaca and D. carthusiana were common and we found one small patch of Thelypteris palustris.

Monmouth 1-3 October This meeting was even more successful than last year's, with 10 members attending and centred at the same hotel, the Royal George. On Saturday, Philip Coke our leader took us to the Forest of Dean. In the Cannop and Soudley areas we recorded 14 species

including Ceterach officinarum which we found in most places we visited, Dryopteris carthusiana growing in the soft leafy woodland soil, and large specimens of Oreopteris limbosperma. Three equisetums were also seen. Later we returned west to Symonds Yat to a magnificent ferny wooded slopedescending steeply to the eastern banks of the River Wye. Again we found 14 species but in great abundance, particularly the Phyllitis scolopendrium and Polystichum setiferum. Some of the former with divided frond apices and some with very wide fronds were collected. P. setiferum 'Decompositum' was seen, as well as large-fronded serrate Polypodium interjectum. Last year I was fortunate enough to find some plants of a hybrid new to Britain between P. australe and P. interjectum on the other bank of the river, and we were on the look-out for more of it. Plants were collected which seemed to agree with the characters of last year's find, and they are being checked at the British Museum (Natural History). On Sunday, we met members of the Gloucestershire Trust for Nature Conservation and with them visited Lancaut, north of Chepstow, where the river makes an almost complete circle, leaving only a narrow neck of land for entry into the area. Here, on very steep slopes and stone screes we recorded 13 species. Later, at Tidenham Chase in the nature reserve we again found 13 species, among them the rather rare ferns for the district, Phegopteris connectilis and Ophioglossum vulgatum. We finished the day, and the meeting, further north at Madgett Hill where we noted 9 species and one ally. We were interested too, to see Lilium martagon growing quite abundantly; the plants were in seed.

LONGER MEETINGS

Ben Alder and Skye 7-12 July This was not an organised Society meeting but was of so much interest that a report must be made here. For many years both Clive Jermy and the Secretary have been attracted to the mountainous region in central Scotland, and when the opportunity presented itself this year to climb and hunt on Ben Alder, it was seized eagerly. We were joined by Tony Worland, his wife and by Mary Ambrose, a research student on ferns. From the nearest "civilisation", the small village of Dalwhinnie, it was 13 miles of very rough going by landrover over hill tracks to the foot of the mountain. Our chief objectives were Athyrium distentifolium and A. flexile, and on the first day we hunted up the north cliffs to the summit in thick mist and eventually, after a difficult descent we found A. distentifolium at the bottom of a deep corrie. On our second day we worked along the east cliffs above Loch a'Bhealaich Bheithe; this proved to be a much better area. We found both the athyriums in quantity, Cryptogramma crispa was abundant on the rock screes along with Dryopteris assimilis and Phegopteris connectilis, and a plant of Lycopodium annotinum was also seen. Other ferns on the mountain were Blechnum spicant, Dryopteris pseudomas, Gymnocarpium dryopteris and Oreopteris limbosperma, along with L. alpina, L. selago and Selaginella selaginoides. Many alpine flowering plants were also noted and a fine colony of Trollius europaeus in full bloom high on a cliff slope. Near our hotel in Dalwhinnie, Botrychium lunaria was common along the road.

On Saturday we travelled west to the Isle of Skye where we met another member, Chris Page, and were introduced by him to a very extensive colony of a hybrid equisetum he had discovered a few years before. This is the hybrid between E. palustre and E.telmateia named E.X font-queri. He also showed us in the same area E. pratense, a new record for Skye. We were joined on the following day by still one more member of the Society, Jack Gardiner, holidaying on the Isle with his family, and we had a good day in the south of Skye, round Loch Slapin and down the Strathaird peninsula to Elgol, which proved good fern country, giving us 18 species of ferns and allies.

WEEK MEETING ON GUERNSEY 17 - 24 April

The field meetings for the year commenced very successfully on Guernsey, one of the most interesting fern regions we have visited, but with an attendance of only 5 members, Howard Gabe, Bryan Makin, Henry Schollick, Anne Sleep and the Secretary. We were joined, on the Island, by David McClintock who is writing a new Flora for Guernsey, and we are most grateful to him for putting his knowledge at our disposal and showing us so much which otherwise we would have missed. Other local botanists, Miss Rosemary de Sausmarez, Nigel Jee and Peter Girard, also Mrs Frances le Sueur from Jersey, spent some time with us and did much to make our visit so successful.

Our first introduction to the Island, coming in from the air, was far from promising - it seemed to be completely built over, with the glass-houses of the tomato growers, of whom there are about 300 in that small territory of about 9 miles by 4 miles, dominating the scene. Our misgivings were quickly dispelled, for although impossible to get very far from habitation, the Island is a maze of narrow lanes, many of them with built-up earth banks on which a wealth of plants grow, ferns included, and we were able to record 18 fern species and two hybrids, also 5 allies, which is not impressive as our meetings go, but 3 rare species we were seeing for the first time, in addition to two rare hybrids found only on Guernsey.

We began our week with a visit to the L'Ancresse Golf Links on the north coast to see Isoetes histrix which grows in damp, sparsely-grassed hollows along with other miniature plants, including the lovely sand crocus, Romulea columnae, in dryer places spangling the ground with its tiny starry blooms of pale purple. Found only in one place on the main-land, it is a common April flower in the Channel Islands. The Isoetes is one of only two species in this genus, and the only one to be found in the British Isles, which does not grow under water and is such an insignificant plant that it is most difficult to find, but going down on hands and knees we found it plentiful. Although it has other stations we found it nowhere else. Another of Guernsey's rarities is the very small Ophioglossum lusitanicum which at one time was quite widespread along the south coast but now is seemingly restricted to only one place in this region. We could never have found it by ourselves, the more so as its season was nearing its close and it was already dying down. Miss de Sausmarez, Mrs le Sueur and Nigel Jee keep a watching brief on the

fern and took us to see it - an experience very much out of proportion to the minute size of this treasure. Still another very uncommon fern, the annual Anogramma leptophylla, flourishes for a short distance on the earth banks of only one lane on the Island - it is more securely established in Jersey - and without help we could not have hoped to track it down in the labyrinth of lanes during a short stay of only one week. The fern is very tiny with 1-2 inch fronds, clinging to the perpendicular bank, and looked very fragile and insecure. Like the Ophioglossum it is a winter fern and dies down in early summer. As it is an annual and passing traffic must blow the spores over at least a fair distance, it seems surprising that this fern persists in confining itself to this one small habitat.

We still had not exhausted Guernsey's rare ferns. After a lapse of about 80 years, in 1965 the hybrid X Asplenophyllitis microdon, an intergeneric cross between Asplenium billotii and Phyllitis scolopendrium, was re-discovered by Peter Girard. Apart from one isolated record in 1862 for North Devon, this fern has only ever been found in Guernsey, and the new discovery was recorded in the Gazette (Vol 10 part 1) by Dr John Lovis and the finder who removed the plant to his garden where it now flourishes as a very large specimen in a pot sunk in the ground. A few other plants have since been found, and I am delighted to add that one more was discovered by our party - it was indeed a feather in our cap and we heartily congratulated the finder, Howard Gabe. The fern grows in the lanes on the soft and crumbly earth banks which are often sheared by the wheels of passing traffic in these narrow thoroughfares. Plant life has thus a precarious existence in such habitats and the microdons are no exception. Peter Girard is at present nursing back to health one of the plants which he found almost dead after being dislodged, and he plans to restore it to its original home when it has recovered. We had the task of transplanting another which we visited and was hanging on by only a few of its roots to a crumbling part of the bank.

This would have completed my recital of Guernsey's rare ferns if we had not had Anne Sleep with us! With the experience of many years of work on fern research at Leeds University under Professor Manton, and the synthesizing of asplenium hybrids, she noted the luxuriant growths of both A. adiantum-nigrum and A. billotii in close proximity, and reasoned that if a natural hybrid were to occur between them, Guernsey was a place for it to happen. And it had happened, for one day Anne spotted a plant of seeming A. adiantum-nigrum which looked slightly different to her eye, and it was indeed what she was looking for, a hybrid new to science. More intensive search led to its discovery in other parts of the Island so it would appear to be quite widespread, but until now, overlooked because of its close resemblance to A. adiantum-nigrum. It has been named A.X sarniense - the Guernsey Spleenwort. The description has been published in the last issue of the Gazette (Vol 10 part 4).

One of the most common ferns on Guernsey is A.billotii, growing to a size and with a luxuriance unknown on the mainland. Particularly in the south, it is widespread and at its best and we never tired of admiring

the fine colonies which we noted in so many places. On the steep slopes above the rocky inlets along the south coast it is very abundant. The only other common Spleenwort is A. adiantum-nigrum, also flourishing with exceptional vigour and possibly with a wider distribution. Another fern which occurs extensively is Phyllitis scolopendrium, closely allied to the aspleniums which explains its ability to hybridise with this genus. Other Spleenworts and the allied Ceterach officinarum are very rare, with the exception of A. marinum which grows well along the south coast, in some places reaching a large size. Walls at Petit Bot Bay and Saints Bay contained magnificent specimens. We found it established on the walls of the Catel Church in the middle of the Island, a most unusual habitat for this sea fern. A ruta-muraria was seen in only three places, and A. trichomanes in a similar number; Ceterach officinarum is recorded for two or three but we only saw it once, in the north near L'Ancresse Common. Two other uncommon species are Blechnum spicant and Dryopteris pseudomas - the former was noted three times and the latter twice.

The common ferns, distributed widely, are Athyrium filix-femina, Dryopteris austriaca, D. filix-mas, Polypodium interjectum and of course, Pteridium aquilinum. It is rather strange that P. interjectum is the only polypody to be found; as it is of hybrid origin, one might expect to find some trace of the other two species, P. australe and P. vulgare, but they seem to be completely absent. The only other fern at all common is Polystichum setiferum, seen in six places, but P. aculeatum was not found. One would think that Guernsey could offer at least a few suitable habitats for Adiantum capillus-veneris, but it is found in only one place, in Candie Churchyard in St Peter's Port, growing in the crevices of an old gravestone. A vigorous colony existed here but weed-killers have been used to keep down weeds around the stones and the fern has suffered badly, only a few struggling pieces still remaining. We hope that local botanists can act to protect them from further damage. Not many allies were seen. I have already mentioned Isoetes histrix, and we also found some Equisetum fluviatile and a very flourishing colony of E. palustre and E. telmateia on waste ground among some ruined greenhouses. E. arvense is fairly common.

I finish with a record of our indebtedness to David McClintock, without whose guidance we would not have been able to see nearly as much as we did. We thank both him and Peter Girard for their invaluable co-operation which made our Guernsey visit a most memorable one. And with them I include Howard Gabe, our leader, who was able to take us speedily and unhesitatingly wherever we wanted to go - AND found another microdon for Guernsey !

THE ANNUAL EXCURSION - BUILTH WELLS, 28 August/4 September

Eight years have elapsed since we last held an excursion in mid-Wales, working from the same centre, the Pencerrig Country House Hotel, about two miles north of Builth Wells. On that occasion we tended to extend our hunting far afield, ignoring much good ground nearer at hand, and this time we planned to fill in some of the gaps. Sixteen members and friends joined us for the whole or part of the week - Kenneth and Dolsheen Adlam, Bert Bruty, Marjorie Castellan, Abdul Chowdry, Philip

Coke, Jimmy Dyce, Geoffrey Gilbert, Mary Iddles, Margaret Kingston, Bryan Makin, Chris Potts, Henry and Peggy Schollick and Tony and Barbara Worland. The weather was not too kind to us, but on the wet days we had only very light and intermittent rain with the exception of the Friday when it put an early end to hunting.

On Sunday we travelled south to Aberedw which had been looked at only very briefly during our previous visit. This time we extended our search along the Llanbadarn-y-Garreg road and side lanes, then back on to the Aberedw Rocks, recording 16 species of ferns and allies. On walls and bridges, Asplenium adiantum-nigrum, A. ruta-muraria and A. trichomanes were seen and along the roadsides Athyrium filix-femina, Dryopteris austriaca, D. filix-mas, D. pseudomas and Polystichum aculeatum, with plenty of Pteridium aquilinum and Equisetum arvense, and on the rocky slopes, Cystopteris fragilis. On the shaded banks of the streams grew Blechnum spicant, Phyllitis scolopendrium, Polypodium interjectum, P. vulgare and Polystichum setiferum. Further south near Crickadarn, a deep wooded ravine was a fern paradise, not in the number of species - 14 were seen - but in the abundance and lush growth of the plants. Only one Spleenwort was noted, A. trichomanes, but the large woodland ferns were common, including both the polystichums and with them very large-growing plants which seemed to be the hybrid P. X bicknellii. There were drifts of Gymnocarpium dryopteris and on the higher ground Oreopteris limbosperma; polypodies were growing on the trees, and we noted a colony with variegated fronds, but were unable to decide whether or not this was induced by the habitat. We guessed that it was, but some rhizomes were collected for growing on.

On Monday we visited the area of the Elan Reservoirs, a series of long narrow reservoirs formed by damming the River Elan at various points of its course through these deep precipitous valleys. We stopped first at the village of Elan and explored a wooded valley to the south which contained 13 species. On the village walls grew A. adiantum-nigrum, A. ruta-muraria, A. trichomanes, C. fragilis, P. interjectum and P. vulgare, while along the stream were A. filix-femina, B. spicant, D. austriaca, D. pseudomas, O. limbosperma and P. aquilinum. On marshy ground higher up we looked in vain for D. carthusiana, but on the rock screes above we found D. abbreviata. In the afternoon we penetrated to the south end of the reservoirs along a rough track round Llannerch y-cawr, and hunted up the Marchnant valley as far as a waterfall and quarries. Along the stream 10 species were seen, A. filix-femina, B. spicant, D. austriaca, D. filix-mas, D. pseudomas, O. limbosperma, P. vulgare, P. aquilinum, Phegopteris connectilis and on the open ground D. abbreviata. Higher up in the quarry there was more P. connectilis growing among the loose rocks, as well as two further species, P. interjectum and rather surprisingly, a single plant of P. setiferum growing on the dry exposed quarry walls. Three allies also were noted, E. arvense and E. palustre, the latter abundant in the pools on the quarry floor. Below the waterfall on the banks of the stream skirting the quarry, were several plants of Lycopodium selago. We finished the day with a quick visit to the rock slopes on the east side of Garreg-ddu

Reservoir and scrambled up the steep narrow ravine of a mountain stream with several waterfalls. Ferns were abundant, 16 species in all, and in addition to those already seen in the area, we found colonies of G. dryopteris, Hymenophyllum wilsonii and P. scolopendrium. On the hillside above, we looked for Cryptogramma crispa on the slate screes, and on the rocks for A. septentrionale - in vain. On the bridge where the stream joins the Reservoir were A. adiantum-nigrum, A. ruta-muraria and A. trichomanes, and on the wall along the water's edge was a very fine extensive colony of A. ruta-muraria and some Ceterach officinarum.

To the south and west of Builth Wells a range of hills falls down to the Irfon River with woods on the north-facing slopes, and this seemed a promising place to hunt on Tuesday. We began in a narrow shaded valley along the banks of a stream near Garth-y-felin, about one-and-a-half miles south of the town, and recorded 12 species. On the rocks A. adiantum-nigrum, A. trichomanes, C. fragilis, P. scolopendrium and P. vulgare were seen, along with some P. connectilis, P. aculeatum and a few plants of P. setiferum on the slopes. The common ferns were A. filix-femina, D. austriaca, D. filix-mas and P. aquilinum. Further to the west in an open cwm called Craig-ddu, we walked down through very steep woodland with a sparse fern population, but it included a single plant of D. carthusiana in typical form which enabled us to show our newer members the differences between this fern and D. austriaca. Following the stream up the cwm we had a very steep climb over rocks with some small but deeply cut ravines where ferns were more prolific and 15 species were noted, among them A. trichomanes, C. fragilis, P. connectilis, P. interjectum, P. vulgare, P. aculeatum and quite a lot of H. wilsonii. The open hillside was covered with large patches of O. limbosperma, and a few plants of D. abbreviata were found. Another stop was made by some woodland along the banks of the Irfon. Here, the large woodland ferns, chiefly D. austriaca predominated, along with G. dryopteris and some colonies of D. carthusiana.

We went further afield on Wednesday to Craig Cerrig-gleisiad, about six miles south of Brecon. These cliffs form a cirque on the north side of an almost 2100 feet hill, are easily accessible from the road and support a very interesting plant population. They are the most southerly station for several Arctic alpines, and we noted abundant Saxifraga oppositifolia and S. hypnoides, the latter in flower in one high narrow ravine. We recorded 15 species of ferns growing on the cliffs and in the screes below. A. trichomanes, both diploid and tetraploid forms were common, as was A. viride, low down and high up on the cliffs, along with C. fragilis. Only one small colony of A. adiantum-nigrum was seen, and a single plant of P. scolopendrium hidden among some large boulders. On the screes, the common fern was D. pseudomas, looking very much like D. abbreviata, which we did not find. We also hunted the screes in vain for Cryptogramma crispa, although it was found here during our previous excursion; we did not see H. wilsonii either this time. A few plants of D. assimilis were noted, and some P. connectilis and P. vulgare, while G. dryopteris was widespread all over the screes; P. aculeatum was obviously very happy in damp clefts in

the high ravines. Over the hillside lower down there were vast areas of P. aquilinum, along with very abundant O. limbosperma, and other ferns A. filix-femina, B. spicant, D. austriaca, D. filix-mas, and in some boggy ground, E. palustre.

We were tempted further away again on Thursday by reports of good fern country around Devil's Bridge, and we travelled there by the mountain road from Rhayadar, rising to 1600 feet in one place over the hills. En route, we stopped at Cwmystwyth to see Asplenium septentrionale which grows on the stone walls by the side of the road through the village. It was growing prolifically in this habitat, in some places developed into large clumps with fronds over 6 inches long. It is not a very usual sight to see this fern in such an approachable place, and some time was spent in admiration and taking photographs. In the village we recorded 13 species along the roadside. With A. septentrionale were A. adiantum-nigrum, A. ruta-muraria, and A. trichomanes, also the two polypodies, P. interjectum and P. vulgare, and on the banks and in the ditch, A. filix-femina, D. austriaca, D. filix-mas, D. pseudomas and O. limbosperma were common. All around there was plentiful P. aquilinum and a few plants of D. assimilis were also seen. Again, we found both diploid and tetraploid forms of A. trichomanes near each other, the former in drystone walling and the latter in mortared walls.

We passed through Devil's Bridge and stopped about 2 miles to the north at Parson's Bridge. A path leads down the steep ravine to the river which it crosses by a footbridge, but finishes a short distance further on. We continued down the gorge, clambering as best we could along its sides with the aid of tree branches and exposed roots. Only a few of us attempted this hazardous scramble and were rewarded by a list of 15 fern species and one ally growing in the lush conditions of the deep humid gorge. The large woodland ferns grew strongly, A. filix-femina, D. austriaca, D. filix-mas, D. pseudomas, with B. spicant, G. dryopteris, P. connectilis, P. scolopendrium, P. vulgare and P. aculeatum. On the rocks were noted A. adiantum-nigrum, A. trichomanes and H. wilsonii, and in the dryer open places O. limbosperma with the ubiquitous Bracken. The one ally seen, on the open slope near the footbridge, was our first and only find of L. clavatum. The members of the party who did not go down the gorge, returned to Cwmystwyth and explored some old mines in the neighbourhood, again in search of A. septentrionale, but they did not find it. They reported the area to be very poor in ferns.

We set off hopefully on Friday morning in rain, to hunt the hilly region around Abergwesyn, crossing over by the hill road from Beulah. The old churchyard walls at Abergwesyn are full of asplenium and abundant C. officinarum with exceptionally large fronds. We continued up the Tregarron road in the Irfon valley and stopped a few miles on to search some woodland, and on the opposite side of the valley, a steep ravine with waterfalls. The wood yielded little, but the scramble up the ravine was rewarding and enjoyed in spite of the fact that we got well-soaked by rain and wet vegetation - one of the party anticipated this by slipping while crossing the river and sitting down in the water ! We

found 10 species, including A. trichomanes, C. fragilis and P. connectilis, but no H. wilsonii which we fully expected to see. Returning to the cars for lunch and getting dried out somewhat, I am almost ashamed to say we did not feel like facing the elements again! We spent the afternoon driving over the mountain road to Tregarron and returned early to Builth Wells via Cwmystwyth and Rhayader. A short stop was made at Rhaeadr Peiran, on high ground about 2 miles west of Cwmystwyth, and more A. septentrionale was found on the roadside walls. We were rather surprised and chagrinned to find, on our return, that while we, about 15 miles to the west, had spent the day in rain, Builth Wells had enjoyed a dry one.

On Saturday we went our various ways, but some of us planned a day on the limestone near Crickhowell before returning home. Our first objective was the cliffs and screes in the extensive Llangattock Quarries, approached by a very steep narrow winding road. In 1963 we recorded 18 species, but our brief stay this time revealed only 11, with the limestone ferns predominating. Of particular note was the widespread prevalence of Gymnocarpium robertianum and C. fragilis. A very good serrate form of P. interjectum was found on a wall by the roadside on our way down the hillside. In Llangattock itself, we found C. officinarum more common and widespread than I have ever known elsewhere; every wall we looked at was full of it.

We then went on to Cwm Clydach, near Brynmawr, to another quarry area also visited in 1963, but this had deteriorated badly from the fern point of view, and the more unusual ferns found on our first visit were no longer so prolific, with perhaps the exception of G. robertianum which continues to flourish in many places including the sides of the old railway track. C. officinarum no longer grows among the stones on the track. This visit, meant to round off the week with something good, made rather a disappointing end to the Excursion, coupled with the failure to see Polypodium australe which we were particularly anxious to find.

INDOOR FERN NOTES

By H J Bruty

Cheilanthes There are about 180 species of this genus from tropical and temperate regions. They are mostly xerophytes, being found in dry climatic zones, and are all terrestial in habit, ranging in height from 4 to 18 inches. Many of them are difficult to grow in cultivation. Widespread in their distribution throughout the world, their requirements will vary with the locality in which they have evolved. For example, C. bergiana comes from South Africa and requires cool dry conditions, C. argentea from China and Japan, slightly moist, C. fendleri from Mexico, hot and dry, and C. lasiophylla from Australia, quite moist conditions. The difficulties in growing them arise from these varying requirements, and those from moister regions are much easier to maintain than those from the arid parts of the world. An indicator of the amount of dryness they will stand is the farinose covering on the fronds - C. argentea has a silvery and attractive under-

surface while C. farinosa has this silveriness on both the upper and lower surfaces of the fronds.

The plants are fairly easy to establish but very rarely can they be potted in a larger than 5 inch pot, in a compost of 3 parts peat, 1 loam and 1 sand. Potting should be done in the spring and summer and not after the end of July. A number are lost during the winter period of rest and this is a critical time for them. It is advisable to collect spores each year to replace those which do not survive. The sporangia are marginal, and black in colour when ripe, usually from July onwards, when they can be collected. Spores should be viable for a year and the best time to sow them is in the spring about the end of February. They germinate quite easily but slow up after that, and they must not be put into too large a pot. It is better to prick them out into small pans and leave them till the following spring before potting. They dislike water over their fronds, so overhead watering should be avoided at all times. One of the easiest to grow in cultivation is C. myriophylla from tropical America, which does very well in a basket.

Nephrolepis This is a small but widely spread genus of about 30 species and quite a number of cultivars. They are terrestial as well as epiphytic. Young plants formed on the stolons can be removed, potted into small pots and placed in the propagating frame until rooted into the soil. Some species can be raised from spores, including N. duffii, N. cordifolia, N. davallioides, N. exaltata, N. hirsutula, N. radicans, N. saligna and N. undulata. The last mentioned is not often seen in cultivation, the reason being it comes from tropical West Africa, is deciduous, and completely dormant for at least 3 months during our winter season, so it could be taken for dead by anyone not acquainted with its habits. The cultivars of N. exaltata are known as Boston Ferns and often revert back to the species if not propagated annually, so when selecting these young plants make sure one has the right stock. They include 'Anna Foster', 'Elegantissima', 'Hillii', 'Piersonii', 'Rooseveltii', 'Wagneri', 'Whitmanii', and 'Wredei'. Other good cultivars are N. biserrata 'Furcans' and N. cordifolia 'Tesselata'.

These plants are shown off to best advantage when grown in baskets suspended from the roof of the house. Wire baskets 12 inches in diameter are best for the purpose, and a compost of 3 parts peat, 1 loam and 1 sand is used. The baskets are lined to the rim with sphagnum moss and the plants, one if from 5 inch pots or three if from 3½ inch pots, are placed in position and the baskets filled with compost to the rims. A one-inch rim of soil is then built up to allow for watering, a good mixture for this being 6 parts of finely sieved loam with 1 part of cement and a little water added to make the mixture like plasticine. This is moulded on to the rims and smoothed off. Once the plants are established, they can be given a liquid nitrogen feed once a month during the growing season. They do very well in a temperature of 55-60 degrees Fahrenheit during winter and slightly higher in the summer.

Pests that attack Nephrolepis are mealy bug and scale. They can both be controlled by using Malathion at ½ an ounce to 2 gallons of water.

BRITISH FERN VARIETIES - The Dryopteris By J W Dyce

Known as the Buckler Ferns, this genus is represented by several species in Britain, and some of them have given many good garden varieties. They are coarser looking, upright in habit lacking the soft grace of the athyriums and polystichums, and generally speaking, their varieties are in keeping, and are much fewer in number cconsisting chiefly of forms crested at the apices of the fronds and at the tips of the pinnae. Pinnule variation consists mostly of narrowing, widening and crimping, and pinnule division is rare. The old-time fern nurseryman had quite an imposing list of varieties but I suspect that many of them were very similar in appearance. The trade nowadays has a fair selection and what is available is good, while others can be found in private collections. Many old varieties which have disappeared no doubt still exist in some old gardens, for these tough ferns are long-lasting and weather-resisting, making them very suitable for the less sheltered situations. Their handsome hard vigour enables them to carry well heavy cresting which in other ferns tends to appear clumsy, and positioned at the back of the border they make a good foil for the softer elegance of the others. Only some species have provided us with the varieties we know, but some which have given us none or very few are nevertheless garden-worthy in their own right.

The male ferns have made the major contribution to our collections. There are three species, and of these, Dryopteris abbreviata the Dwarf Male Fern - but very often not so dwarf - has contributed least. It has one very fine variety 'Crispa', about 18-24 inches in height, which can occasionally be found in the wild; I have collected it in Scotland and in the Lake District. This fern is a native of mountainous regions, but the other two species, D. filix-mas the Male Fern, and D. pseudomas the Scaly Male Fern, are distributed all over the country and both have given us many good variations, chiefly in the 'Cristata' sections, most of them unnamed, although probably some did have names in the past. They are so similar, however, and easily obtained from spores, that the naming of any except really outstanding ones is unnecessary. Good named ones from the past are still obtainable and are exceptionally fine plants, D. f-m 'Grandiceps Wills' with large spreading apical crests and narrow pinnae finely crested, 'Polydactyla Dadds' finely tasselled on apices and pinnae, and 'Cristata Martindale' fully crested with the pinnae all curving upwards. The best of D. pseudomas crested forms, and indeed, the best of all the section is 'Cristata The King', an apt name for this variety. Good specimens are tall with very beautiful symmetrical crests on their tapering pinnae and finely developed arching terminal crests which give the plants a fine grace. Other pseudomas varieties are 'Grandiceps Askew' with a well-developed heavy cresting, and 'Polydactyla Wills' very similar to 'The King' but broader.

The best of the pinnule-change varieties is D. f-m 'Linearis' and its crested forms 'Linearis cristata' and 'Linearis Polydactyla'. In these the pinnules are very narrow, so much so that the large conspicuous sori are developed along their edges, giving them a most unusual but handsome appearance. They are tall, strong-growing and quickly form large clumps,

and although the fronds are not very rigid they have a peculiar hard feel. The finest is 'Linearis Polydactyla' which has long open crests on the pinnae and apices; these with the very narrow pinnules edged with the sori confer on the variety a delicate grace which is quite alien to the Male ferns. Another filix-mas is 'Decomposita', foliose with finely toothed pinnules. A variety which has appeared a few times among self-sown sporelings in my garden is a very tall, upright, dark-green fern with dentate pinnules, the tiny segments also dentate and twisted to give a crisped appearance to the fronds. They would seem to originate from a similar variety, not so strong-growing, which I collected in Borrowdale many years ago and which possibly started life as a wind-blown spore from the Askew Fern Nursery at Grange. When I visited Sizergh Castle near Kendal this year with Reginald Kaye we saw a similar fern but cannot trace it in any of the old illustrated fern books. A suitable name would be D. f-m 'Crispa Dentata'. In the wild, a fern rather like it, but a hybrid between filix-mas and pseudomas called D. X tavellii, is frequently seen, tall and strong-growing with large dentate pinnules. Sometimes I have found them with very crisped pinnules and they would make excellent garden plants. There is also a very crisped variety of pseudomas with very dense and very dark scales all the way up the fronds; it is a very striking plant. Dwarf forms, up to 12 inches high, of filix-mas with very congested and crispate fronds, but very brittle, can be obtained.

D. austriaca, better known as dilatata, has not been very prolific in its varieties. Two available ones are 'Cristata' and 'Lepidota', the latter a most beautiful plant with twice divided pinnules and well covered on the main and secondary stems with reddish-brown scales. In its crested form, 'Lepidota Cristata', even the pinnules are crested. It breeds true from spores and self-sown sporelings appear frequently in the garden. It is about 12-18 inches high. There are many dwarf forms of D. austriaca to be found in the wild, particularly on mountains and in pinewoods. Many of these 'montane' kinds belong to the recently discovered new species D. assimilis, which makes a good garden plant even in the absence of varieties. However, I rather suspect that 'Lepidota' mentioned above, may actually be a variety of assimilis and not of austriaca. The red-brown scales are so similar to those noted on assimilis, and it also has the same habit of thrusting its bottom pinnae forward.

Several species have given us no varieties, or none that have survived. D. aemula is the best of these and is such a beautiful crispy fern that it needs no varieties. Seen in mass in the wild on Arran where it is so prolific that in places it becomes the dominant plant, it is a magnificent sight to behold. D. carthusiana is a very graceful fern with tall narrow fronds, which frequents wet ground but is quite happy in the garden. One of our rarest ferns, D. cristata, grows in bogs and needs similar conditions in cultivation. With its upright and narrow fronds it is a very striking and beautiful fern, but it should not be collected in the wild - it spores freely, and a fertile pinna will provide the means for obtaining many plants.

AN ANATOMY OF PTERIDOLOGICAL BIBLIOMANIA

By H L Schollick

The casual purchase of a cheap parcel of hardy ferns from Taylor's Lily Hill Nursery introduced me to the fern hobby. A year later I discovered Reginald Kaye's collection of ferns and from that moment I was hooked.

As a publisher-bookseller I have a professional interest in believing there is a book on every subject and so I acquired Anne Pratt and the Observer's Book of Ferns, and, by a great stroke of luck, Lowe's eight volumes of British and Exotic Ferns very cheaply. There the matter rested until I joined the Society and got as the first benefit Jimmy Dyce's select bibliography. This touched off my collecting instinct, and as my job took me about the country I rapidly collected most of the titles in the list, and these frequently pointed the way to other titles. Smith's Historia Filicum, (or in other editions Ferns British and Foreign), was invaluable in this respect. It soon became obvious that a first successful raid on an antiquarian bookshop represented the accumulation of years and few booksellers maintained a regular supply; but once the bookseller knew that I was interested I began to receive offers of books and those I did not want I passed on to the secretary so that booksellers were fairly sure of a purchaser for anything they reported.

Now that the collection has grown to more than 200 volumes, it seems to have developed a life of its own and constantly to suggest new fields of interest. Roughly the books can be classified as follows, but for reasons of space I have omitted the books on non-European ferns except where they have a general interest.

THE SETTING

The Victorian Fern Craze by David Allen. This is an invaluable book as it emphasizes the human side of our hobby and it is for this reason that I particularly like Smith's Historia Filicum and the prefaces to the old fern books, and also the biographies in Lowe's Fern Growing.

THE BEGINNER'S BOOKS:

Lankester:	British Ferns, 1860
Moore:	Handbook of British Ferns, 1853.
Moore:	Popular History of British Ferns, 1859
Plues:	British Ferns and Allied Plants, 1855
Anne Pratt:	The Grasses, Sedges and Ferns of Great Britain, 1859(?)
Step:	Wayside and Woodland Ferns, 1908
Taylor:	British Ferns and Mosses, 1960

THE HORTICULTURAL BOOKS:

Birkenhead:	Ferns and Fern Culture, 1892
Hibberd:	The Fern Garden, 1870
Kaye:	Hardy Ferns, 1968
Macself:	Ferns for Garden and Greenhouse 1952.
Nicholson:	Illustrated Dictionary of Gardening, 8 volumes
Schneider:	The Book of Choice Ferns, 3 Volumes, 1892-94
Schneider:	Choice Ferns for Amateurs, 1905.

Nicholson's eight volumes are still to be picked up for about £3 and as a record of what the Victorians grew they are invaluable to anyone who has not got copies of the catalogues of the Victorian nurserymen.

THE PALACE OF VARIETIES:

Top of the bill of course is Druery's British Ferns and their Varieties and the Handbook of British Ferns which was published for the Society, Lowe's Our Native Ferns, 2 volumes, as well as Lowe's British Ferns in the Young Collectors Series. This, although a cheap book, is one of the hardest to find.

THE PICTURE BOOKS

Occasionally the fern plates from Sowerby's English Botany can be found separately.

Sowerby and Johnson: Ferns and Fern Allies of Great Britain, 1855. This comes uncoloured, half coloured, full coloured and in a Victorian 'gift pack' !

Hooker and Greville: Icones Filicum, two folio volumes, with coloured copper plate engravings. This is of course an expensive work.

Lindley and Moore: The Nature Printed Ferns, folio 1855, 51 plates. Unless one has actually had the pleasure of handling this book it is impossible to form an idea of its magnificence, and in the last ten years its price has moved up as rapidly as anything in the botanical market.

Lindley and Moore: The Nature Printed British Ferns, two volumes, 8vo, 1859, 114 plates. This can still be found but the price is increasing and it is invaluable in dealing with the varieties.

Hooker's Genera Filicum, 1838. This contains Francis Bauer's wonderful paintings of the pinnae and sori and sporangia. Francis Bauer was Botanical Artist to Queen Victoria, and after completing this book retired to his native Austria.

Hooker's The Century of Ferns, reprinted from Icones Plantarum, and the Second Century of Ferns which, oddly enough, was the first to appear.

Hooker's Garden Ferns and British Ferns.

These are all colour plate books and such books are now beginning to command high prices.

THE AUTHORITIES:

The Hooker volumes as given above.

Hooker and Baker: Synopsis Filicum.

Hooker: Species Filicum, 5 volumes, 1841 to 1866
I still lack this although a reprint is now available.

Milde: Filices Europae Atlantidis, etc. 1867.

Newman: A History of British Ferns and Allied Plants, 1844.

Schkuhr: Kryptogamische Gewachse, Wittenberg 1809, 4to with 219 coloured copper plates.

THE NATURE PRINTED BOOKS:

Lindley and Moore, as given above. These were printed by Henry Bradbury who also printed the Nature Printed Seaweeds, and here the collection ran away with itself and involved me in collecting books on this kind of printing, and I have von Heufler Kryptogamische Flore des Arpaschtales,

1853. This is the first real book done by the process and is so described in the Lindley and Moore folio. The process was invented by Alois Auer at the Imperial Printing House in Vienna, and I have his Die Entdeckung des Naturselbstdruckes, 1854. Cave and Wakeman Typographia Naturalis is a history of the process from the time of Leonardo to the most modern exponents of it as an artistic form, and this alerted me to the existence of H C Baildon's Nature Printed Ferns. This is mentioned also in the Victorian Fern Craze. A chance enquiry whilst I was in the shop of C K Broadhurst at Southport produced copies of the only fascicle of this work that was printed and which came from the Baildon family; although it carries Reeves' imprint on the title page it is not listed in Reeves' list of publications, nor is it at South Kensington. I suspect it was never formally issued to the public but the single fascicle was produced as a prospectus. I hope to write a short note about it at some future date.

HEATH AND MOORE:

Forgive the obvious pun. I have various editions of the popular works of both of them and they are worth a study in themselves as a bibliographical exercise.

THE EUROPEAN FERNS:

Britten's European Ferns is still about and can be bought for £3 or £4, but prices are according to the condition. I have even seen a mint copy at £10.

Rasbach and Wilmanns: Die Farnpflanzen Zentraleuropas, 1968.
Riviere, Andre and Rose: Les Fougeres, 2 volumes, 1867, 1868.
Eberle: Farne im Herzen Europas. This last is a handy little book with first rate black and white photographs.

THE SCIENTIFIC APPROACH:

Professor Manton: Problems of Cytology and Evolution in the Pteridophyta.
Professor Holttum: Ferns of Malaya, (Volume II of the Flora of Malaya).
Verdoorn: Manual of Pteridology.

THE LITTLE BOOKS:

Chanter : Ferny Combes. A ramble after ferns in the Glens and Valleys of Devonshire.
Edwards : Ferns of the Axe.
Gissing : Ferns of Wakefield.
Howe(Ed): Ferns of Derbyshire.
Linton : Ferns of the English Lake Country.
Ferns and Flowers of Cromer.

THE SPECIMEN BOOKS:

Young : The Ferns of Wales.
Flintoft : Collection of the British Ferns in the English Lake District.
Muir (publisher) : The Ferns of Moffat.
Paterson : Gleanings among the British Ferns.

CHECKING THE RECORD:

On the Society's excursions I have felt the need for the County Floras of

which I have twelve, the Botanical Atlas of the British Isles, Druce's Comital Flora, and Watson's Topographical Botany, and of course Hyde, Wade and Harrison's Welsh Ferns.

As one whose interest is in the growing of ferns and their varieties, whenever I have had the chance I have collected the catalogues of the old nurserymen, and I now have catalogues from Askew, Birkenhead, Ebford, Taylor and Kaye, and there are many others, especially May of Edmonton, I would like to have.

Finally, the two books which I have not mentioned and which, along with the great Lindley and Moore folio, have given me the most pleasure, are James Bolton's Filices Britannicae, Leeds, 1785, with its 31 beautiful copper plates in colour; the first British book entirely devoted to ferns and written with a charming modesty. I hope one day to find the supplement, or both parts bound together. The second is the reprint of our own Fern Gazette with its wealth of personal reminiscence. I keep the parts unbound so that they are easy to read in bed !

This is a selection of the books I have; there are a number of classics which I know will take a long time to find, but the search is enjoyable. I would be glad to hear from anyone who is interested in this aspect of our hobby.

THE FERNS OF RHODESIA AND MOZAMBIQUE

by Edith S Bayley

Ferns grow all over Rhodesia and mostly appear in the rainy season which is usually from November to April. Even the most arid parts have their own species which suddenly appear after the first rains. It is amazing how one day will be bare ground with intense heat, rain will fall and, two days after, up are the fern shoots, wild flowers and grass. These are very hardy ferns in their own habitat and easily grown from spores. They unfortunately are tricky to move and very often go completely dormant in a pot for a year. They should be kept more on the dry side than usual fern culture but never completely dry until well established.

In the Zambesi Valley where the heat gets well over 100 degrees F. in the shade, great fern masses cling to rocksand hillsides and look really dead. As soon as the rains fall old curled fronds unfold and become green together with the new fronds and the neighbouring "Resurrection Plant".

On our own farm in Mashonaland, I have found many hardy deciduous ferns as well as Adiantum in the stream banks, also Dryopteris. The latter will even stand full sun if their roots are constantly damp. Our adiantums are coarse ones, but sometimes tucked in a nook away from floods one will find the finer species flourishing. In the flood season whole banks of Adiantum will be washed under the muddy water and deposited even miles from the original site, which if shady enough, will soon be a pretty bank of ferns.

The Eastern region of Rhodesia in the Mountains of Inyanga and Chimanimani is the fern collector's paradise. The altitudes and soil vary so much that one can find hundreds of types of fern, from the giant

tree ferns up to 15 feet high to the tiniest Selaginella growing near the waterfalls. Tree ferns are usually found in ravines on the hillsides or in subsidence holes. These are caused by the porous type of rock which suddenly collapses leaving great holes, ideal for tree fern spores to lodge in. So far I have found three varieties of tree fern and am now trying to grow the spores. Most of the ferns from this area transplant well in pots, if their soil is mainly acid, so I have to watch carefully as our water is very full of lime.

On the Eastern slopes of Mount Inyangani (nearly 9000 feet high) where the Tea Estates are situated and near Chipinga further south one finds dense forests in mist belts with all kinds of ferns, including two species of Lygodium. These can be grown successfully from spores, but it is difficult to transplant a large plant. Along the river banks in the same area where it is very humid, one finds the Osmunda fern or royal fern. It is a sight to see the fast rushing crystal clear water lined by this lovely plant. It too likes the lime-free water.

In Mozambique the mountains produce much the same vegetation as along all our Eastern Mountains, gradually going down to the Pungwe Flats, forests and plains. In these forests where it is very hot, one finds many Platycerium. Unfortunately, I have not as yet been able to go there so am unable to say what varieties they are, but there are at least two different ones. I have also been brought a fern which grows on the edge of the forests on the beach at the sea. Judging from the size of the fronds, it must be large, but I was unable to identify it.

In these humid areas one finds several types of Asplenium, Dryopteris, Davallia, Polypodium, Pellaea and Lygodium.

(A botanical account of the ferns in this area is contained in Flora Zambesiaca, Pteridophyta, by Schelpe, 1970. - EDITOR)

DRYOPTERIS CRISTATA

By J W Dyce

Dryopteris cristata seems to have loomed large in our field activities during the past few years, and some of us have been visiting its haunts in the wild so frequently that we are becoming almost blase about this rare fern - and the rarer hybrid D. X uliginosa ! I say "almost", for one can never really regard this fern lightly when looking at its graceful upright habit, spearing up through sphagnum moss or through a tussock of grass in a Norfolk marsh.

The increased interest in the fern has led many to ask why it is called "cristata" when it is not crested. Browsing through Volume 5 of the Gazette recently, I paused at an article about the fern by Dr F W Stansfield (No 11, December 1928) with this same opening gambit, and giving an explanation. When the name was given in 1753, tasselled ferns were not known or were merely regarded as deformities. The Doctor quotes, but does not give his authority, that the name "was bestowed by Linnaeus in consequence of a fanciful comparison between the cluster of its peculiarly erect fronds and the aigrette of vertical feathers on the head of the peacock Pave cristatus". The primary meaning of the epithet

crista was a tuft on the head of an animal, especially a bird; afterwards it came, by transference, to mean the plume or crest of a helmet. It was probably Thomas Moore who first applied the term to the abnormal developments now known as the crests of ferns.

In view of the fact that one of next year's weekend meetings is to be in Nottinghamshire to explore places quoted in old records for D. cristata, it will be of interest to mention some further facts given by Dr Stansfield, and also by Dr S P Rowlands in a "follow-up" article in the June 1929 Gazette (Volume 5, No 12). Even then it was recognised that the fern was becoming rarer because of improved drainage, cultivation and the encroachments of civilization. Many places where it formerly grew had been searched in vain, and Norfolk was probably its principal remaining station, but it was also reported from Suffolk, Nottinghamshire, Cheshire, Yorkshire, the Isle of Wight, and also from Renfrewshire in Scotland.

Dr Rowlands makes the point that even where its old haunts had been left almost untouched, D. cristata still seemed to be disappearing. Twenty years previously it was plentiful in Oxton Bogs in Nottinghamshire, but searches during 1926/28 failed to reveal a single plant. Another Notts locality, Bulwell Marsh, was now (1928) a golf links ! Drainage probably accounted for its disappearance from Thorne Waste, near Doncaster, where it had occurred at least up to 1872, but hardly for its disappearance from Askham Bog, near York, where one or two plants were seen lingering as late as 1916. He understood it was extinct in Staffordshire and probably also Cheshire.

Since Dr Rowlands wrote, of course, D. cristata has been found in Surrey (1938) by his brother-in-law, L G Payne, and still exists there, and, possibly, may still be found in other places, including some of those from which it is said to have disappeared. In several stations in Norfolk and one in Suffolk which we have visited, the fern seems in no danger of dying out, and I venture to add that the forebodings of our friends in the late 1920s would appear to have been unduly pessimistic. The hybrid D. X uliginosa between cristata and carthusiana also flourishes with its parents in some places, and long may it continue to do so.

HARDY FERNS FOR THE ROCK GARDEN (concluded) By H S Wacher

Polypodium - I realise that what used to be a very comprehensive group under this name has now been sub-divided into smaller groups. But I must apologise for not having become familiar with this new grouping and ask indulgence for giving the names under which I originally obtained the plants. All of this group are stoloniferous, either woody on the surface, or fibrous running just beneath the surface. P. vulgare the commonest of this group, will grow anywhere with or without lime, and is often to be seen quite happy on the sloping roof-tiles of old buildings. The variety of its sports is legion, and I only give a few which appeal to me most - 'Cambricum', 'Cornubiense', 'Foliosum',

'Bifido-cristatum', 'Barrowii', 'Plumosum', 'Pulcherrimum', 'Prestonii', and 'Trichomanoides', this last bearing the most dissected fronds of all. All of these varieties grow better when given rich and moist but well-drained peaty soil, and produce fronds up to one foot in height.

P. calcareum is often seen in mountain districts, where its tough fibrous stolons run about freely in old stone dry walls. The black wire-like stems of eight inches carry flat spreading fronds at the apex.

P. dryopteris (the Oak Fern) is very similar in appearance to the preceding, but is very invasive when happy as a ground cover around dwarf ericaceous plants, where its fronds will come up through the thickest parts of heathers and the like; in fact, sometimes too freely, for it is very difficult to eradicate where not wanted. It is common in the Scottish Highlands. P. phegopteris (the Beech Fern) is very similar in habit of growth, although not so invasive. The fronds are, however, borne in a vertical plane, as against the horizontal plane of the other two species.

Polystichum is another very extensive group with hosts of lovely sports. Most of these make very large dense tufts, the fronds persisting throughout the following winter. Quite the most beautiful period is when the new fronds arise each spring, uncurling from a covering of thick silky hairs as they develop. The two main groups consist of P. aculeatum and P. angulare (setiferum), each with numbers of lovely sports. These are all of easy culture, even in full sun, provided that there is plenty of humus for their roots. To those especially interested, I suggest the perusal of a trade list, such as that of Reginald Kaye, where frond descriptions are given. P. lonchitis (the Holly Fern) is quite different in appearance, bearing very stiff narrow fronds with very spiny edges, up to fifteen inches in height. It needs well-drained soil, but is very temperamental and when once established should be left undisturbed. It is locally common in the European Alps, even up to altitudes of 6000 feet, where it grows in the open among fallen rocks, from whence I have obtained my plants.

Pteris cretica is not reckoned to be hardy outside in this district, but it will survive many of our winters. I have it in an unheated green-house where the crested form seeds itself freely in a north-facing wall. In this situation it has survived our severe winters of 1947 and 1963, when everything in the house was frozen solid.

Scolopendrium vulgare (the Hartstongue Fern) is very common in the Devon woods. The fronds are quite unlike those of any other species and persist throughout each following winter, which gives it added value. It seeds itself very freely (too much so with me) and thrives best when in well-drained banks or walls - of limestone or otherwise. Self-sown seedlings in tufa rock remain very small with fronds of only two or three inches, against the normal one foot or more. There are many sports, some with such twisted, divided and crested fronds as to make them quite unlike the type species. Of these the most interesting which I have grown are - 'Abruptum', 'Coronatum', 'Crispum', 'Curiosum', 'Laceratum', 'Marginatum', 'Multifidum', 'Ramo-cristatum', 'Sagittato-projectum', and 'Undulatum'. In a few instances spontaneous sports have sown themselves with me, but taken as a whole, they are perhaps the most

difficult of ferns to propagate, for this can only be achieved by digging up a plant and pulling it to pieces, which one hesitates to do with a good spectacular plant.
Struthiopteris germanica (The Ostrich Feather Fern). Of all ferns this species develops the most perfect shuttlecock in shape. It needs wet peaty soil in which to thrive, when the fronds will reach to three feet.

I conclude by repeating that the varietal names do at least describe accurately the character of the fronds of each particular plant. Finally, I hope that these notes will create interest among members of our Society, and possibly encourage others to join us.

WHAT MAKES A PTERIDOLOGIST PTICK?

By Reginald Kaye

It might be interesting to explore the reasons why anyone first acquired the leaning towards growing ferns amongst all the thousands of aspects of gardening and cultivation of plants for pleasure. It is very clear that perhaps the majority of people regard all ferns as bracken, a state of affairs quite incomprehensible to anyone who takes the slightest interest in plants. Quite recently I was showing a collection of slides to some friends, over a hundred widely separated species and varieties of ferns from simple forms of Phyllitis to the most highly developed plumose Polystichums. Even under these circumstances one of the ladies present said that she could not see any difference between the varieties - they were just ferns! Yet the experienced fern-grower can detect at a glance the differences between a large number of variations of the same species. I suppose it is allied to the case of the shepherd who can recognise any individual sheep in his flock, a skill which I for one recognise but cannot emulate.

Digging back into the past I cannot fix on any one point when my own lifelong interest in ferns was initiated, my first recollection of them dating back to when I was six years old. I remember a lot of clumps of male fern in our garden and I amused myself by running my fingers up the fronds removing all the pinnae, for which I received a good hiding! Shortly afterwards, having lost my father, and my family being in somewhat lean circumstances, I was shunted off to stay with my grandfather in Harrogate during all the school holidays. Here the routine was to accompany him to town each morning to shop, followed by a walk through the country lanes before lunch. On these walks many wild flowers were introduced to me. After lunch while my grandfather had his nap, I was banished to the garden and greenhouses to browse around until we went for another walk. I remember a heap of tufa adorned with many plants of Polystichum setiferum 'Acutilobum', and in the greenhouses many large plants of Asplenium bulbiferum and a large Platycerium amongst all the other subjects grown, so I had an intimate acquaintance with these ferns at an early age. Some days I was allowed to visit an old nurseryman near at hand, Alva J Hall, and I spent many hours amongst his extensive collection of alpine plants, but remember being shown a large Athyrium filix-femina 'Grandiceps' as being something special. In my late teens I acquired a copy of C T Druery's British Ferns and their Varieties,

and I think perhaps it was this book which really started me off.

Yet, none of my friends took the slightest interest in plants - I was a 'loner'. On one occasion a dozen of us were on a walking tour in Lakeland and I held up the party for an hour or more exploring William Askew's then marvellous collection of fern varieties. After some recrimination, I was extricated from the nursery to continue the tour. Some fifty years later one of these friends still visits me several times a year, and he still regards me as being a bit queer while accepting the position philosophically.

It was not until 1937 when I took over John Stormonth's nursery after his death, that I acquired anything like a comprehensive collection of ferns, though I already had a good many kinds obtained from here and there. I joined the British Pteridological Society during the thirties and went on excursions with such fine fern men as the old Dr Stansfield, Sinclair, Cranfield, Greenfield, Elliot and many others, and by no means least, Robert Whiteside whose collection I bought when he was no longer able to look after it, a matter of some three or four 5-ton wagon loads. Unfortunately, he had had a horse running loose through the garden shortly before I got the ferns and all the labels were broken and kicked out, so I had quite a job sorting out all the varieties, many of them originals.

All this account may be of little interest to others, and I am still as far as ever from answering my query, but I should still like to know the answer. I do know that I have had a lifetime of interest cultivating and raising ferns.

SOUTHPORT FLOWER SHOW

By J W Dyce

There was a very definite increase of interest in ferns this year, evidenced by the number of calls at our Stand in the Societies Tent. Many callers brought fronds for naming or because they thought we would find them of interest, and it was very obvious that fern-growing is not restricted to members of the Society! We made members of some of them, and the help extended to others may bring in more recruits over the next few months.

The exhibits in the competition classes for ferns contained the usual very representative selection of varieties available today, and the Judges' report by Reginald Kaye is appended. Noel Brookfield again won the Society's Cup with a magnificent entry in Class 6, and the only other entry, by W W Howard, won second prize. I would like to give a detailed account of the ferns in the various classes, but space is limited, so I shall list all the prize-winners and add some comments only about the exhibits. The names are shown in order of winning and other competitors shown in brackets.

Class 7. B Hayhurst, N Brookfield, R Trippitt. (3 entries)
8. B Hayhurst, N Brookfield, W W Howard. (3 entries)
9. N Robinson, N Brookfield, B Hayhurst. (W W Howard) (4 entries)

10. B Hayhurst, R Trippitt, N Brookfield. (W W Howard) (4 entries)
11. N Brookfield. (one entry)
12. B Hayhurst, N Brookfield, N Robinson. (3 entries)
13. B Hayhurst, N Brookfield, N Robinson. (3 entries)
14. B Hayhurst, N Robinson, N Brookfield. (3 entries)
15. N Brookfield. (one entry)
16. N Brookfield, B Hayhurst, W W Howard. (3 entries)
17. B Hayhurst, N Brookfield, W W Howard. (E Plowman) (4 entries)
18. Lady Pilkington, E Plowman, B Hayhurst, N Brookfield. (4 entries)

We see the same few names in most of the classes, first one then another in the lead. Our two largest growers, Noel Brookfield and Bernard Hayhurst collect the majority of the prizes, and it says a lot for the others that they do not get discouraged but continue to pit their skill against them and even manage to beat them at times. We would like very much to see more competitors coming forward to challenge the supremacy of Noel and Bernard.

Some very fine ferns featured in the exhibits, and the Platycerium which won Lady Pilkington first prize in Class 18, was worthy of the further award of the Trophy which it earned as one of the outstanding exhibits in the Show. Some of the best ferns included Athyrium filix-femina 'Clarissima', 'Percristatum Druery', 'Victoriae'; Dryopteris filix-mas 'Cristata', 'Crispa Cristata', 'Linearis'; D. pseudomas 'Angustata Cristata'; Phyllitis scolopendrium 'Crispum Nobilis Bolton', 'Ramosa'; Polypodium vulgare 'Cambricum Barrowii', 'Cambricum Hadwinii', 'Pulcherrimum'; Polystichum aculeatum 'Pulcherrimum Bevis'; P. setiferum 'Divisilobum cristatum Ivery', 'Plumoso-divisilobum'. Among the foreign ferns, Adiantum venustum and Blechnum tabulare were outstanding hardy ones, and greenhouse ones included Davallia canariensis, Platycerium alcicorne, and, of course, Adiantum raddianum 'Kensington Gem', one of the loveliest of the adiantums, large-growing and ideal for showing.

Judges' Report by Reginald Kaye

As in former years, Mr W G Mackenzie VMH and I were engaged to judge the entries in the classes for hardy British and foreign ferns. This year our task was considerably lighter, as the Southport Show Committee had found it necessary to cut down the number of classes and also restrict the number of entries in each class. This experimental practice was designed to reduce costs, eliminate inferior entries, and also discourage those enterprising individuals who acquired season tickets to the Show for the price of a few entries, without going to the trouble of actually exhibiting. This new policy was applied to all sections of amateur exhibits, but is subject to revision, if thought desirable, for another year. Unfortunately, genuine late entries were refused on account of this new ruling, when the allotted number of entries had been received, although some of the latter were not implemented.

On the whole, entries were slightly below previous years' quality, but still there were many very good plants to be seen, and staging generally was good. A pity a better background than the tent sides could not be

provided, for the back rows of ferns were seen more in silhouette, losing much of their beauty.

The Platycerium shown in Class 18 could not be faulted and qualified for a trophy for an outstanding competitive exhibit. To obtain such a trophy, perfection of cultivation and presentation is essential, but there is no reason why anyone might not aspire to attain such perfection.

HELENSBURGH AND GARELOCH HORTICULTURAL SOCIETY SHOW

Alison Rutherford again set up an exhibit of ferns at her local Flower Show at Helensburgh in Dunbartonshire, in August, in an endeavour to spread the interest in ferns and in our Society. She has sent me photographs which show a remarkably interesting lay-out; it must have attracted much attention. At one end was a collection of hardy ferns in a natural setting, above which was a miniature indoor greenhouse - two more were in the centre, all filled with ferns. In one corner was a display of specimens of the three Polypody species, and fine fern varieties were positioned at all vantage points, with a large detailed drawing behind each explaining its characteristics. Names were in English as well as in Latin. Many fern books were also exhibited and the name of the Society was well to the fore.

A tremendous amount of work was put in by Alison who arranged and staged the exhibit without any help. We congratulate her on a magnificent effort, with a warm thank you on behalf of the Society. We hope it will not have all been in vain and that it will bear fruit in the shape of new members - we would like to see many more from her part of the country. In spite of its fern riches, our membership in Scotland is very low; the reason why, I do not know - and it is a Scot who is writing! We welcome activities like Alison's, and hope others will emulate her example in an endeavour to make Scotland more fern conscious.

FERN GARDENS

It has been suggested that we publish in the Newsletter a list of gardens throughout the country containing ferns, which members may be able to visit. As well as gardens and parks open to the public, several members have kindly allowed me to add their gardens to the list, but before visiting their private gardens I would ask you to note carefully the owners' requests to make prior arrangements by letter or telephone. I would emphasise, too, that the inclusion of any garden open to the public, does not necessarily imply that admittance can be gained at any time a member calls. Lack of space precludes the inclusion of details here and intending visitors must make their own enquiries.

This list is a preliminary one and I shall welcome further suggestions and information on gardens to include - or exclude. It must be understood that I have no personal knowledge about many of these gardens, and in many cases the fern content may be negligible.

Botanic Gardens and Gardens open to the public

Botanic Garden, University of North Wales, Bangor, Caernarvonshire
Botanic Garden, Glasgow
Royal Botanic Gardens, Edinburgh
Royal Botanic Gardens, Kew, Surrey
University Botanic Garden, Cambridge
University Botanic Garden, Hull
University Botanic Garden, Oxford

Bellahouston Park, Glasgow
Brooklyn Gardens, Perth
Harlow Car Gardens, (Northern Horticultural Society), Harrogate, Yorks
Inverewe Gardens, Poolewe, Achnasheen, Ross-shire
Savill Garden, Windsor Great Park, Berks
Sizergh Castle Gardens, Near Kendal, Westmorland
Wakehurst Place Gardens, Ardingly, Haywards Heath, Sussex
Wisley Gardens, (Royal Horticultural Society), Ripley, Surrey

Private Gardens BY PRIOR ARRANGEMENT

Miss Askew, Grange, Borrowdale, Keswick, Cumberland. LETTER OR PHONE
N Brookfield, 102 Stamford Road, Birkdale, Southport, Lancs
LETTER OR PHONE - WEEKENDS PREFERRED
Mrs K M Catlin, The Beeches, Standon, Nr Stafford. LETTER OR PHONE
C H Fisher, Drabbington, Thornbury, Bromyard, Hereford. LETTER ONLY
B Hayhurst, 91 Windermere Road, Freehold, Lancaster. LETTER OR PHONE
Mr & Mrs F J Healey, 38 Lockstile Way, Goring, Reading, Berks. PHONE
F Jackson, Knotts View, Stonethwaite, Borrowdale, Keswick, Cumberland.
LETTER
Mrs J Loraine, Greencombe, Porlock, Somerset. LETTER OR PHONE
J Lord, Townhead, Austwick, Via Lancaster. LETTER
H L Schollick, 96 Church Way, Iffley, Oxford. LETTER OR PHONE
Mrs M R Stuart, Millglen, Baledmund Road, Moulin, Pitlochry, Perth.
LETTER OR PHONE
Dr H S Wacher, 77 St Stephens Road, Canterbury, Kent. LETTER OR PHONE

Nursery

Reginald Kaye, Waithman Nurseries, Silverdale, Carnforth, Lancs
DURING BUSINESS HOURS

Flower Show

Southport Flower Show. Held in August annually. (1972 - 24-26 Aug)

GARDENS TO VISIT - The Gardeners' Sunday Organisation publishes annually a booklet listing gardens opened to the public in aid of the Gardeners' Royal Benevolent Society and the Royal Gardeners' Orphan Fund, which may be visited during the year from March to October. The 1972 edition entitled "Gardens to Visit", can be obtained through W H Smith's or Wyman's bookstalls for 10p, or direct from the Organiser, Mrs K Collett, White Witches, Claygate Road, Dorking, Surrey for 13p post free.

SPORE AND PLANT EXCHANGE

Enclosed with this issue of the Newsletter is the first issue of our Spore List which can be regarded as an interim one. It contains only the spores held in stock, and if the ones you want are not listed please let David Russell know - his address is 20 York Avenue, Stanmore, Middlesex. Only by knowing what members are likely to want, can he make this service effective, so send him in addition any ideas and suggestions you may have for improving the Exchange. Also, make a point of sending him spores of your ferns which you think others might like to have. One of the activities at future field meetings will be the collection of spores from any unusual species found, and this need not be restricted to meetings of the Society, BUT a word of warning - do not strip a rare or uncommon fern of its fronds to obtain the spores; a few pinnae from one or two fronds will provide all that is needed, and do no damage to the plant.

The American Fern Society also runs a Spore Exchange, and lists can be obtained from the organiser, Neill D Hall, 1225 NE 95th Street, Seattle 15, Washington, USA. This list contains many ferns we do not have, and if you avail yourself of the opportunity to obtain spores from this source, please do not forget that the Exchange works both ways, and Neill will be glad to have from you spores of our ferns, varieties as well as species.

The University of Hull Botanic Garden issues a list of seeds and spores offered for exchange; this can be obtained from the Assistant Curator, Botanic Garden, Department of Botany, The University, Hull HU6 7RX.

Some members like to make direct contacts in other countries for exchange purposes, and we shall gladly add your name to the list if you will let the Secretary know. All correspondence must be between the interested parties, and not via the Secretary.
The following overseas members are interested in the exchange of spores -

Mrs E S Bayley, Danbury Park, Postbox 21 MR, Marlborough, Salisbury, Rhodesia.

Mr G Kunkel, Camino Viejo 9, Tafira Alta, Las Palmas de Gran Canaria, Canary Islands.

Mrs Sylvia Leatherman, of the Los Angeles International Fern Society, 2637 North Lee Avenue, South el Monte, California 91733, USA.

Mr F H Low-Choy, 42 Lang Parade, Auchenflower, Brisbane, Australia 4066

Mrs Nancy M Sherlock, 590E Kings Road, North Vancouver, B.C, Canada.

Miss K H Stocker, Mapua, Via Nelson, New Zealand.

Wanted

Miss Alison Rutherford, Rosslyn Cottage, Church Road, Rhu, Helensburgh, Dunbartonshire, wants living plants of Polypodium australe.

Professor T M C Taylor, Millstream Road, R.R.6, Victoria, B.C, Canada, would like to exchange herbarium specimens. He is interested in any European species, and can offer North American and Hawaiian species in exchange.

FERN BOOKS

A service provided by the Secretary is the purchase of fern books from various sources for resale to members at a small profit to help our funds. Newer members are always eager to procure these books which are difficult to pick up elsewhere, and our "bookshop" fulfills a real need. There is usually a fairly good stock in hand, and at present, some good titles held are Lowe's Our Native Ferns, 2 Vol. for £4, Newman's History of British Ferns and Allied Plants £2, Anne Pratt's Ferns of Great Britain and their Allies £2, Britten's European Ferns, two copies, a superb one at £4.50 and a good one at £4, Smith's Ferns: British and Foreign £1.50, and many others. A list can be supplied on application to the Secretary, who is also prepared to keep a record of particular books wanted by members, for offer to them if and when the books can be acquired by him.

This year we bought up part of the publisher's remainder stock of David Allen's Victorian Fern Craze. We hold 300 copies which are offered for sale at 40 pence each, or if sent by post, 50 pence. This book published in 1969, was reviewed in the 1970 Gazette (Vol 10 part 3), and is an excellent buy at the price.

We also hold stocks of the back issues of the Gazette complete from Volume 1 onwards. The first five volumes have been reprinted by a modern photographic process, and some following volumes are getting low and will have to be reprinted by the same means. These early volumes deal chiefly with fern hunting, the description and the cultivation of the many varieties of the British ferns, and are written very largely by the two outstanding authorities in this field, C T Druery and Dr F W Stansfield. They are a veritable encyclopaedia of fern knowledge for the collector of varieties, and are available either in complete sets or as separate issues from the Secretary who will supply particulars. Back issues of the Newsletter are also available for sale, but only from No 5 when this publication developed into its present format from a duplicated foolscap information sheet sent out to members. Another publication is a small booklet, written by Margaret Merryweather for the guidance of students who, as she did, choose ferns for their thesis while at teachers training colleges or similar institutions. It is entitled A Students' Guide to a Selection of Fern Literature and Suggestions for Study, and is published by our Society.

Wanted Anyone having no further use for fern books lying around and considering getting rid of them, should give the Society the opportunity to acquire them, either by sale or presentation to us - this also applies to old Gazettes which we are always very glad to have.

Proposed new fern book Beginners in the study of ferns find great difficulty in identifying many of the species from the descriptions given in books, and appeals for help, addressed to the Secretary, have been answered by invitations to join the Society and come into the field with us. There, we can explain simply by word and demonstration, the characters distinguishing species which, to the uninitiated eye, look so alike. So very often the question has been levelled at me, "Why don't

you write a book in this simple non-technical manner for people like us, explaining the differences in language we can understand and supported by line drawings?" A very tall order! - even the botanists who write so facilely at their desks, are very chary about committing themselves at times out-of-doors, when parted from their microscopes. Take for example, the Polypodies and the confusion which has existed in the field since it was discovered that there are three species, not just one. There is no doubt about it, there are three, as one can see when typical plants are looked at. But how many plants are typical plants?!

However, fools rush in - - - - - - -, and when the beginner's problem was aired at the A G M this year, and all the remarks seemed to be aimed at the Secretary, he, very meekly and very rashly, agreed to consider what he could do about it! It was agreed, however, that it would be a good idea to get a consensus of members' opinions and ideas on the subject, and suggestions for the build-up of a book which would fulfill all the requirements, to give some positive guidance to the beginner working on his own. I therefore ask for the views of members, not just from experienced ones, but from those newer members whose problems are still fresh in their minds. They may feel that their ideas are not worth passing on, or that they will be regarded lightly, but they may prove the most worthwhile for the kind of book we are considering. Write now - don't leave it till tomorrow, for tomorrow never comes!

INTERNATIONAL FERN SYMPOSIUM 13-14 April 1972

Members of the BPS will already have received a notice about the above Symposium to be held at the Linnean Society's rooms at Burlington House, Piccadilly, London W 1.

We are hoping that this will be a memorable occasion when leading pteridologists from ten or more countries will be able to get together to discuss the Classification and phylogeny of the true ferns (Filicopsida). There will be a chance to meet overseas visitors and other members at a reception at Burlington House on April 13 and at the Symposium Dinner (at Chelsea College, London S W 3, on the 14th). As the host Society specifically interested in ferns, the organisers are hoping for a good turnout of members of the BPS. Please indicate your hopeful intentions on the slip enclosed with this Newsletter.

Clive Jermy, Secretary
Organising Committee.

READING CIRCLE

For the information of our newer members we have a Reading Circle which circulates the American Fern Journal among those interested. This is issued quarterly and contains much valuable information for those seriously interested in ferns. Please advise the Secretary who will add your name to the list.

DISTRIBUTION OF BRITISH PTERIDOPHYTES

Dr D H Dalby of the Department of Botany, Imperial College, London, is studying the distribution of the British pteridophytes, using data obtained by the B.S.B.I. mapping scheme. It is hoped in the first instance to show the pattern of floristic richness in different parts of the British Isles, revealing a contrast between areas with many species and those with few. Some of these latter areas will appear poor because there are really only a few species present, whilst others will seem poor because they are under-recorded. If this latter category can be distinguished, it may help the Society in indicating areas deserving further field study and recording. We shall therefore be following Dr Dalby's work closely, and issuing, from time to time, lists of areas where recording is desirable.

WORLD FERN SOCIETIES

For the information of members who are interested in the ferns of other countries, we give a list of fern societies known to us. If others exist, the Secretary will be glad to have information about them.

AMERICAN FERN SOCIETY Correspondence c/o Smithsonian Institution, Washington, D C, USA

LOS ANGELES INTERNATIONAL FERN SOCIETY Wilbur W Olson, Membership Chairman, 13715 Cordary Avenue, Hawthorne, California 90250, USA

JAPANESE PTERIDOLOGICAL SOCIETY Correspondence c/o Dr K Iwatsuki, Dept of Botany, Faculty of Science, Kyoto University, Kyoto, Japan

THE NIPPON FERNIST CLUB Correspondence c/o Professor Satoru Kurata, Dept of Forest Botany, Faculty of Agriculture, Tokyo University, Hongo, Bunkyo-ku, Tokyo, Japan 113

NELSON NEW ZEALAND FERN SOCIETY Correspondence c/o Miss K H Stocker, Mapua, via Nelson, New Zealand

BOOK REVIEWS

By J A Crabbe

FERNS, MOSSES AND FUNGI, a Little Guide in colour, by Floyd S Shuttleworth and Herbert S Zim, illustrated by Dorothea Barlowe, Sy Barlowe, Barbara Wolff and Jean Zallinger, 160 pages. 10 x 15.2 x 1 cms. Hamlyn, London 1969. Price £0.30.

The title gives but three groups, but this guide to non-flowering plants presents, in its pocket-size, a magnificent micropanorama of the whole flowerless world of over 100,000 species, from simplest algae to complex gymnosperms, and with fossils included. The whole book is richly and competently illustrated in colour.

Of the 400 species described and illustrated, around 84 ferns and fern-allies occupy 31 pages, about one-third of them being species which grow

in Britain. English names head the descriptions in the main text. Scientific names are given in a list at the end, arranged in page order. A final index is to the English names.

TOM'S WEEDS, the story of Rochford's and their house-plants, by Mea Allan, 220 pages, illustrated. 14 x 22 x 2.5 cms. Faber and Faber, London, 26 October 1970. Price £2.50.

Following her earlier biographical gems, Miss Allan now presents this world-renowned nursery which formerly dealt with a large range of specialist produce and now concentrates on house-plants. "Tom's Weeds" was the name given by Rochford employees to foliage plants which were the beginning of the house-plant revolution of the 'fifties which was initiated - and the name 'house-plant' coined - by the present head of the firm Thomas Rochford the Third.

Fernwise, the list of medals and awards from 1897 to 1912 gives several, including their own novelties Adiantum faulkneri, Cyrtomium falcatum 'Rochfordii' and Nephrolepis exaltata 'Rochfordii'; then but twelve awards were received (for pot-plants) until house-plants crowd the list every year from 1952. In earlier years common florist ferns such as Adiantum, Cyrtomium, Nephrolepis and Pteris were propagated by the thousand, then ferns formed a decreasing element and the list of plants grown in 1970 includes only Asplenium nidus.

This is a success story, from 1840 when Michael Rochford left Ireland, through the great days of outstanding nursery leadership, to its rescue from languish after World War Two and its inspired recovery to become the biggest house-plant business in the world.

Reviewed by J W Dyce -

A STUDENTS' GUIDE TO A SELECTION OF FERN LITERATURE AND SUGGESTIONS FOR STUDY, by Margaret E Merryweather, 12 pages, 12.8 x 20.5 cms. British Pteridological Society, 1971. Price £0.25.

The study of ferns is becoming a popular subject with students taking science courses at colleges of education, and the author is one of several who have written to the Society asking for guidance in their studies. Some of them have since become active members, including Margaret Merryweather, and with the encouragement and guidance of our Editor, Clive Jermy, she has written this booklet which is a very comprehensive guide for students to the literature most suitable for fern studies. It reviews books at all levels, from the popular ones for field work to the most erudite botanical productions, with chapters on the identification of ferns, classification and taxonomy, cytology, evolution, ecology and general biology, and finishes with suggestions for study. A bibliography is appended. Altogether, this is a most useful and concise little book, written from practical experience, and is thoroughly recommended for the student of ferns.

NEW MEMBERS AND SUBSCRIBERS

AARESTRUP Erik, Skolevej 54, 6531 Nustrup, Denmark
AARHUS UNIVERSITY, Botanisk Institut, 8000 Aarhus C, Denmark
ADAMEK Gaston, Flurstrasse 25, 3014 Bern, Switzerland
AMBROSE Miss Mary, Dept of Genetics, University of Liverpool P O Box 147, Liverpool L69 3Bx
AUSTICK'S BOOKSHOPS, University Branch, 21 Blenheim Terrace, Leeds 2
BARNES Peter G, Mangold Bank, Middle Lane, Buglawton, Near Congleton, Cheshire
BINFIELD Andrew, 121 Denton Road, Denton, Near Newhaven, Sussex
BOTANISK CENTRALBIBLIOTEK, Gothersgade 130, DK-1123 Copenhagen K, Denmark
BRIAN Dr Harry M, 2712 Hill Street, Alexandria, La 71301, USA
BRITISH COLUMBIA UNIVERSITY, Woodward Library - Serials, Vancouver 8, British Columbia, Canada
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CAPE COAST UNIVERSITY COLLEGE, The Librarian, Private Post Bag, Cape Coast, Ghana, West Africa
CHICAGO FIELD MUSEUM OF NATURAL HISTORY, Roosevelt Road at Lake Shore Drive, Chicago, Illinois 60605, USA
CRANE Michael D, BSc, Dept of Botany, The University, Sheffield S10 2TN
DUNCAN William, Durie Estate, Leven, Fifeshire
EGLIN Mrs I, Devenant House, Burton, Carnforth, Lancs
FAVIER Dr Charles, 50 Quettehou (Manche), France
FORD FOUNDATION SPONSORED PROGRAM, U P College of Agriculture Library, College, Laguna, Philippines
GENT Peter D, 23 Carlingford Road, Stockton Heath, Cheshire
GHATAK Dr J, P O Box 021, University College, Cape Coast, Ghana, West Africa
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HEBDING Rene, c/o Julien Lapostolle, Jardin Botanique, Les Cedres, 06 St-Jean-Cap-Ferrat, France
HEIDELBERG UNIVERSITY, Institut fur Systematische Botanik und Pflanzengeographie, Hofmeisterweg 4, 6900 Heidelberg 1, Germany
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HIRST K S, 18 Dixon Street, Barrowford, near Nelson, Lancs
HOARE A E, 15 Essex Road, Borehamwood, Herts
HOWARD Dr Alma, White Hall, Chinley, (Derbyshire), via Stockport, Cheshire SK12 6BR
IDDLES Miss E M, 9B Cecil Road, Weston-super-Mare, Somerset
JERMYN Lt Col R O, Alards, Starvecrow Hill, Tonbridge, Kent
KALYANI UNIVERSITY, Central Library, Kalyani, Nadia, West Bengal, India
LINDSAY D C, British Antarctic Survey, Research Gardens Winterbourne, University of Birmingham, Birmingham B15 2TT
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MICKEL Dr John, New York Botanical Garden, Bronx, New York 10458, USA

MUIR Dr M D, Dept of Geology, Imperial College, Prince Consort Road, London S W 7
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PRICE Michael, Dept of Botany, UPCA, College, Laguna, Philippines
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SHAW Mrs J, 36 Grange Road, Peterborough
SHEPARD B, 87 Elm Grove, Newport, Isle of Wight
SMITH Dr Alan R, PhD, Dept of Botany, University of California, Berkeley, California 94720, USA
SMITH M C, Church Farm, Winford, Bristol
SPARROW Dr A M, c/o Dr Howard, Paterson Laboratories, Christie Hospital and Holt Radium Institute, Manchester M20 9BX
STIRLING A McG, 17 Austen Road, Jordanhill, Glasgow W 3
SYDNEY ROYAL BOTANIC GARDENS AND NATIONAL HERBARIUM, The Librarian, Sydney, New South Wales, Australia 2000
TAIWAN NATIONAL UNIVERSITY, Dept of Botany, Taipei, Taiwan, China
TAYLOR Professor T M C, Millstream Road, R R 6, Victoria, B C, Canada
TEEVAN Thomas, 3 Eglinton Road, Donnybrook, Dublin 4, Eire
TRIPPITT Robert, 329 Whitehall Road, Westfield, Wyke, Bradford, Yorks
WHITE Stephen J, 48 Forrest Road, Kew, Richmond, Surrey
WILKINS Paul, Fell Edge, High Ireby, Carlisle CA5 1HF, Cumberland
WILSON G P, MA BSc, Rosedale, Perth Road, Crieff, Perthshire
WOODHAMS John R, 203 Barnfield Avenue, Kingston-upon-Thames, Surrey
SENCKENBERGISCHE NATURFORSCHENDE GESELLSCHAFT, Abtlg Zeitschriften-Tauschverkehr, Senckenberg-Anlage 25, 6 Frankfurt-M 1, Germany

MARRIAGES

We have had quite a spate of weddings among our young active members this year -

Tony Worland - Barbara Adamson
Tessa Moore - Stephen Hill
James Merryweather - Margaret Butterfield

The last is of particular interest as it was a real Fern Society wedding. Both James and Margaret joined us in early 1969 and met for the first time during the Annual Excursion at Launceston in the autumn of that year. We wish the couples long and happy married lives, and add the hope that their interest in ferns and the Society will not be lessened.

We have learned, too, of the marriage of Patrick Acock, and to him and his wife we also extend our good wishes for a long and happy future together.

OBITUARIES

Tomitaro (Shoto) Namegata.

It is with great regret that we record here the passing of Mr Tomitaro (Shoto) Namegata, the President and Secretary of the Nippon Fernist Club, and associated with our Society since 1961. He died on the 26th March 1970, after an illness lasting almost two years.

Unfortunately Mr Namegata was not known personally to most members of our Society. This energetic and indefatigable man devoted his life to ferns, and it was solely through his efforts that the Nippon Fernist Club grew into a large and active society with a present membership of several hundred. It publishes its own Journal (in Japanese) and holds a full programme of lively field meetings and lectures. One excursion which I attended had a memorable ninety participants, and two large coaches were needed to convey our party! Although this number illustrates the interest in the extremely rich fern flora of Japan, it is, I am sure, also a reflection of the enthusiastic zeal and organising ability of Mr Namegata.

He was a keen and able fern grower, the type of man who loved his plants as children. His house and garden overflowed with ferns, and he seemed to have as much success with tiny, rock-crevice species and rare epiphytes as with the large, strong-growing Polystichums. Although his interests were primarily horticultural, he was also avidly interested in the scientific researches carried out on ferns, himself making a detailed study of the genus Ophioglossum. He published a number of articles, and, most important, his book Collection and cultivation of our ferns and fern-allies (1961), regrettably not yet translated into English, despite the universal value of its supplement "An enumeration of the Japanese pteridophytes" which was compiled in collaboration with Professor S Kurata.

One of Mr Namegata's most cherished aims was to foster international understanding and cooperation through the study of ferns. He seemed to be especially fond of England, and when I visited Japan (1967-69) to work as a research fellow on ferns at Tokyo University of Education, no-one could have done more to make me feel accepted. He welcomed me to his own home as well as to the Nippon Fernist Club excursions, and all these occasions I remember with nostalgia, for each one was made memorable by the vital and enthusiastic presence of Mr Namegata. He was a lively and energetic man of great character, and he will undoubtedly be sorely missed by his Japanese friends and by this English pteridologist whose great privilege it was to know him personally.

Anne Sleep

Percy Greenfield. An Obituary appears in the Gazette, but the Secretary would like to pay additional tribute here to this very dear friend who for many years was a close companion. Both he and the Society owe him a great deal - without his guidance in the difficult post-war years it is doubtful if the Society would exist today, and the Secretary's knowledge of ferns would be infinitely the poorer.

Harold J Marchant. We had little opportunity to get to know Harold Marchant who lived in New Zealand, but he came over to this country on holiday in 1969 and attended some of our meetings. His chief interest was in the rhododendrons, and he joined in our Arran meeting that year so that he could visit Brodick Castle which is famous for its collection of these shrubs. He was back again in the early summer this year, and would no doubt have taken part in some of our meetings, but soon after his arrival he died suddenly in London. We extend our deepest sympathy to his widow and daughter.

Mrs Marie Elicker. It is with regret that we learned recently of the death of this American member who joined the Society in 1968. We extend our sympathy to her relatives.

FERN COLLECTION AT CAPEL MANOR HORTICULTURAL CENTRE, WALTHAM CROSS, HERTS

At the end of last year, David Russell our Spore Exchange organiser learned from the Officer in Charge that Capel Manor Horticultural Centre were clearing a woodland area in their grounds, and would be interested in using part of it for a collection of hardy ferns, both British and foreign species and varieties. A meeting of our interested members decided that we should co-operate with the Centre, and an elected committee visited Capel Manor to discuss the matter and survey the site. We agreed to supply ferns and give any necessary help to make the collection a really comprehensive one, and it will be available for study and information purposes.

At the moment, preparatory work is still going on, but it is hoped this winter and in the spring to start planting, and over the years the collection will gradually increase in range and interest.

STOP PRESS - Southport Flower Show

We have just been informed by the Flower Show Secretary that it has been decided to discontinue the limitation of entries in the competitive classes which operated at the 1971 Show. In his Judges Report, Reginald Kaye refers to the matter and how it penalised the genuine exhibitors, and this will be good news for them. It has also been decided that the scale of entry fees should be changed from the blanket system of covering the whole or part of the Schedule to -
Up to 4 entries - £1. Additional entries - 20p per entry.

PLEASE COMPLETE AND RETURN AS SOON AS POSSIBLE
AND NOT LATER THAN MID-MARCH 1972

To: Mr A J Worland, 102 Queens Close, Harston, Cambs.

I hope to attend the meetings marked 'X' below. Please advise any further information I require, when available.

(NOTE - At the end of March 1972 all members who have sent in their forms will be advised full details of all the meetings with names of other interested members. It is pointed out that the date mid-March for the return of forms is to assist the Meetings Secretary to finalise arrangements, and does not prevent members from sending in their names at a later date.)

BEFORE FILLING IN THE FORM PLEASE READ THE NOTES BELOW, AND ALSO THOSE APPENDED TO THE MEETINGS PROGRAMME.

NOTES FOR PASSENGERS

Lifts cannot be guaranteed to and from venues.
You will be advised of car-owners, if any, living near you, and all enquiries must be made direct, enclosing STAMPED ADDRESSED ENVELOPES for replies.
You are expected to share expenses with car-owners.

Mark 'X'		Members with cars		Members without cars	
		No. of spare seats available for passengers to and from venues	No. of spare seats available for passengers during meetings	Making own travel arrangements	Would like lift to and from venues
	1 International Symposium 13/14 April				
	2 Fern Houses, Kew 20 May				
	3 Axe Valley 2/4 June				
	4 Sedbergh, Yorks 16/18 June				
	5 North Wales 30 June/2 July				
	6 Essex 9 July				
	7 Teesdale 21/24 July				
	8 Moffat 24/30 July				
	9 Sussex 11/13 August				
	10 Garden visits, Oxford 19 August				
	11 Nottinghamshire 1/3 September				
	12 Lake District 16/23 September				

NAME .....

ADDRESS .....

.....

SUGGESTIONS FOR FUTURE MEETINGS -

THE BRITISH PTERIDOLOGICAL SOCIETY

MEETINGS PROGRAMME FOR 1972

MEETINGS SECRETARY - A J Worland, 102 Queen's Close, Harston, Cambs.

The 1972 Meetings Programme has been arranged along similar lines to the programmes which have proved popular in recent years, but it has been decided not to revisit any of the 1971 centres in 1972, since there is usually a tendency for attendances to decline when successive visits are paid to the same place.

In addition to the usual British Meetings Programme, a trip to the Spanish Pyrenees is being proposed for 1972 and if there is sufficient support for this meeting, it will be run by Mrs Eileen Brightman for a fortnight between the dates of 19th August and 16th September.

As it is necessary to plan meetings as far in advance as possible to give leaders plenty of time to arrange details, members are invited to send in suggestions for 1973 when the 1972 Meetings Forms are returned.

Please note that when members are attending meetings, they are requested to observe strictly the Society's rules for the conservation of rare plants, and to respect the leaders' rulings when taken to sites of special interest.

MEETINGS

Saturday 12 February	Indoor Meeting at the British Museum (Natural History), Cromwell Road, London S W 7, from 3 pm. Meet in the Dept of Botany in the afternoon for discussions, exhibits and conversazione, and later in the Conversazione Room for talk by Dr Trevor Walker of the University of Newcastle-upon-Tyne on "The Uses and Anatomy of Ferns". Buffet meal available.
Thursday/Friday 13/14 April	Joint British Pteridological Society and Linnean Society International Symposium "The Phylogeny and Classification of the Filicopsida". Full details from Clive Jermy, Dept of Botany, British Museum (Natural History). (SEE SEPARATE FORM)
Friday 14 April	Symposium Dinner at Chelsea College, London S W 3. (SEE SEPARATE FORM)
Saturday 20 May	Visit to the Fern Houses at Kew Botanic Gardens. Meet at 2.30 pm outside the Fern Houses.

Friday/Sunday
2/4 June

Weekend Meeting in the Axe Valley, Devon.
Leader - Martin Rickard
Centre - The George Hotel, Fore Street, Chard, Somerset.
Tel: Chard 3413
B and B - Mrs D Taylor, "Apple Orchard", Avishays, Near Chard. Tel: Chard 2410
Camping - Crawley Farm Camp Site, 4½ miles west of Chard on A30. Tel: Chard 2259

Friday/Sunday
16/18 June

Weekend Meeting at Sedbergh, Yorks.
Leader - Fred Jackson
Centre - Sun Inn, Dent, Sedbergh. Tel: Dent 208
Bed, breakfast and evening meal from £1.80.
PLEASE BOOK EARLY
B and B - Mrs G Carrol, "The Old Parsonage", Dent. Tel: Dent 283
Camping - Pinfold Caravan Site, ½ mile east of Sedbergh on A684. Tel: Sedbergh 576

Friday/Sunday
30 June/2 July

Weekend Meeting in North Wales.
Leader - Len Beer or Jeff Duckett
Centre - Waverley Hotel, Holyhead Road, Bangor, Caern.
Tel: Bangor 2017
Camping - Ogwen Bank Site, 5 miles south of Bangor on A5. Tel: Bethesda 486

Sunday
9 July

Day Trip to Essex.
Leader - Vivien Green
Meet at Honeysuckle Cottage, Halstead Road, Aldham, Colchester, Essex, by noon. Honeysuckle Cottage is on A604, east of Aldham Village, and members are invited to arrive early (after 11 am) to look at the garden, and have coffee before the Meeting starts.

Friday/Monday
21/24 July

Teesdale - especially for Equisetum flora.
Leader - Chris Page
Centre - High Force Hotel, Near Middleton-in-Teesdale, Co Durham. Tel: Forrest in Teesdale 264
B and B - Mrs June Dent, Lunedale, Wythes Hill, Middleton-in-Teesdale. Tel: M-in-T 349
It is planned to combine this Meeting with the Moffat one, meeting here on the Friday evening then travelling north on the Monday, but members may join this Meeting as a weekend one.

Monday/Sunday
24/30 July

Moffat, Dumfriesshire.
Leaders - Clive Jermy and Martin Rickard
Centre - Moffat House Hotel, High Street, Moffat.
Tel: Moffat 39
B and B - Mrs Eileen Baty, "St Olaf",
Off Dickson St, Eastgate, Moffat.
Tel: Moffat 220
Camping - Coatsgate Cafe, Beattock, near
Moffat on A74.
This Meeting is planned as an active botanical one, concentrating on the alpine pteridophytes of the Dumfries/Moffat area

Friday/Sunday
11/13 August

Weekend Meeting in Sussex.
Leader - Jimmy Dyce
Centre - Middlehouse Hotel, Mayfield, Sussex.
Tel: Mayfield 2146
Alternative - Royal Oak Hotel, Mayfield.
Tel: Mayfield 3196
Camping - Green Views Caravan Fields, Broad Oak, Heathfield, 1 mile east of Heathfield on north of A265.

Saturday
19 August

Visit to Henry Schollick's garden, 96 Church Way, Iffley, Oxford, at 2.30 pm. Preceded by visit to Oxford Botanic Gardens. Meet at the main entrance at 11 am. Bring packed lunches.

Thursday/
Saturday
24/26 August

Southport Flower Show
Many fern classes, showing a fine selection of the best varieties. The Society has a Stand in the Societies' Tent. Come and visit us when at the Show.

Friday/Sunday
1/3 September

Weekend Meeting in Nottinghamshire.
(Old Dryopteris cristata habitats)
Leader - Tony Worland
Centre - Star and Garter Hotel, Hazelford, Bleasby.

Saturday/
Saturday
16/23 September

The Lake District.
Leader - Fred Jackson
Centre - Bridge Hotel, Buttermere, Cumberland.
Tel: Buttermere 202
Alternative - Fish Inn, Buttermere.

Saturday
7 October

Annual General Meeting in London at 3.30 pm.
To be held in conjunction with Indoor Meeting.
Venue to be advised with AGM Notice.

Saturday 7 October	Indoor Meeting in London from 3 pm. Incorporating the A G M at 3.30 pm. Venue not yet fixed and will be advised with AGM Notice. Informal talks, exhibition and conversazione continuing into the evening. Buffet meal available.

WILL ALL MEMBERS ATTENDING ANY OF THE FIELD MEETINGS PLEASE READ THE FOLLOWING NOTES, ALSO THOSE ON THE MEETINGS FORM.

NOTE 1 With the exception of the Annual General Meeting, further necessary information regarding the meetings will be advised only to members who complete and return the Meetings Form (attached) to the Meetings Secretary.

NOTE 2 Members must make their own accommodation arrangements. If any help additional to the information supplied above is required, please apply to the Meetings Secretary.

NOTE 3 Weekend meetings commence on the Friday evening to allow an early start to be made on the following morning. Members unable to arrive on the Friday evening, and wishing to join the Saturday and/or Sunday meetings, should advise the Meetings Secretary or the Leader beforehand, and should be at the meeting place before 9.30 am. While every endeavour will be made to do so, we cannot guarantee to leave sufficiently explicit directions to enable late-comers to follow on and make contact.

NOTE 4 Private car transport will be used. Please mark the Meetings Form accordingly.

NOTE 5 EARLY BOOKING OF ACCOMMODATION IS ADVISED FOR MID-SEASON MEETINGS.

FERN HOLIDAY ACCOMMODATION

Our member Mrs E M Borup, 30 Earls Court Square, London S W 5, has a small house at Sticklepath (Belstone), South Zeal, Devon, 18 miles west of Exeter and 3 miles from Okehampton. She lives there from time to time, but there are periods when members could use it, to be self-catering and taking own linen; it has four beds (two bedrooms), bathroom and electricity. The house is situated on high ground above the village, with buses close by, plenty of level car parking space, and adjacent to some of the finest parts of Dartmoor. Views extend to Exmoor and, in the winter, to South Wales. Fuller information can be obtained from Mrs Borup.

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Published by the British Pteridological Society

THE BRITISH PTERIDOLOGICAL SOCIETY

Newsletter No 10

November 1972

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MAR 5 - 1973
GARDEN LIBRARY

SECRETARY
J W Dyce
46 Sedley Rise
LOUGHTON Essex

NEWSLETTER No 10 NOVEMBER 1972

EDITED BY
The Secretary J W Dyce

EDITORIAL

Very often at our meetings I find myself silently listening, thinking and wondering - at the dinner table in our hotels, in the bar with a malt whisky in hand (!), on grassy banks eating lunch, or in the lee of a rock sheltering from the driving rain on mountain tops, always it is fern talk which surrounds me. The botanist, the naturalist, the collector and grower are all obsessed with the subject which never palls, is seemingly inexhaustible, and binds them all in harmonious friendship. I listen and question - what do ferns have to produce this effect ? To most people they are just "ferns", green uninteresting plants which all look alike, so different from flowers which have an infinity of pleasing shapes and rich colours to captivate the eye. Are we a race apart - do we have the deep penetrating gaze, denied to ordinary mortals, which alone can see the delicate beauty in these plants, the fine cutting of pinnules, the grace of fronds, and the soft blending of the shades of green ? There is absolutely no doubt in our minds that ferns are beautiful, the most interesting plants on earth, and the most rewarding. We go through all manner of difficulties just to look at a plant we have seen innumerable times before, we are stung by nettles, torn by thorns and brambles, cooked by scorching suns, soaked, half-frozen and exhausted on rain-swept hills, but still we go on to worship before some small insignificant patch of green verdure, and rejoice because we have been able to find it and gaze at it ! Bodily discomfort and pain shrink into nothingness before it. Daft ? Crazy ? Mad ? These epithets are without doubt applied to us by the onlooker regarding us with tolerant amusement, and I suppose we are, but what a pleasurable madness ! It takes us into all manner of lovely places, in the happy company of kindred spirits. We live in an ugly age of bitterness, hate and strife, and it is good to be able to escape at times into this world of ferns, to enjoy the peace and satisfaction which is ours. Long may the fern craze flourish to give us such benefits.

Once again I sit down to prepare my Newsletter, and as I gather around me the various bits and pieces which I have to endeavour to blend into one whole, I am very conscious of the paucity of my material, and so my first job has been to search through the membership list to find out which of you I can bludgeon into contributing a paper. As I write, I do not know what success I shall have, but I hope to obtain sufficient

material to offer something of interest to everyone without having to include too much "padding" written by myself. Do, please, regard this as a hint addressed to you personally; all of us, even beginners, have something to contribute which can be of interest and help to others, and I shall not object to being swamped with articles - I may not be able to use all of them right away, but there are always the lean years ahead.

As a postscript to what I have written above, I have had an excellent response to my appeal, and if I have not been exactly swamped with articles, at least I have received many more than I can possibly use with this issue. My selection has been made with a view to achieving a blend which, I hope, will suit all tastes, so if your paper does not appear this time, please do not think your labour has been in vain. All the contributions I have received have been just what I want, and I am grateful to everyone who has rallied to my aid.

REMINDERS AND INFORMATION BRIEFS

SUBSCRIPTIONS became due on 1 July - have you paid yours ? If not, the Treasurer will be glad to receive it(£1.25) as soon as possible.

SUBSCRIPTION RECEIPTS are not sent out separately unless specially asked for and a stamp sent to cover postage, but are enclosed with the first following communication or publication.

LIFE MEMBERSHIP - Periodically we get enquiries about life membership in the Society, but after discussion by the Committee a few years ago, it was decided that this was not a practical proposition in these times of fast-rising costs.

POSTAGES - To ease the burden on our funds caused by present day heavy postal charges, members are asked to enclose stamps (not stamped addressed envelopes) when replies to letters are required.

MEETINGS CARDS 1973 are enclosed with this Newsletter to all inland members. Overseas members, visiting Britain, can obtain them on application to the Meetings Secretary.

READING CIRCLE - For the information of our newer members we have a Reading Circle which circulates the American Fern Journal among those interested. This is issued quarterly and contains much valuable information for those seriously interested in ferns. Please advise the Secretary who will add your name to the list.

WANTED - FERN BOOKS AND OLD GAZETTES - Anyone having no further use for fern books lying around and considering getting rid of them, should give the Society the opportunity to acquire them, either by sale or gift to us. This also applies to old Gazettes which we are always very glad to have. Several instances have come to our notice where, on the death of a member, his Gazettes have been thrown out or burned and fern books have shared the same fate or been handed over to jumble sales - why not include a clause in your will to ensure that they come to us either by sale or presentation ?

FINANCIAL STATEMENT AS AT 30 JUNE 1972

ORDINARY ACCOUNT

1970/71	1971 30 June			£
£212		To Balance		139.83
417		Subscriptions		474.60
5		Donations		2.70
		Sales	£	
297		Gazettes & Newsletters	324.36	
-		Victorian Fern Craze	18.90	
-		Beginner's Guide	4.00	
1		Sundry	22.65	369.91
30		Interest on Deposit Account		20.99
-		Symposium Receipts		841.99
		Transfer from Publications Account -		
-		Account Purchases and Re-printing	118.26	
				£ 1968.28

1970/71		£
-	By Payment to Tiptree Book Services a/c 300 copies Victorian Fern Craze	42.00
57	Payment Metloc Secretarial Services a/c Newsletter No 9 £86.05	
-	Beginner's Guide 37.66	
-	Reprint Gaz V.7 n.9 19.80	
-	Gaz V.8 n.2 18.80	162.31
	Subscriptions -	
	Council for Nature 5.05	
8	Royal Horticultural Society 5.00	10.05
12	Printing and Stationery	33.13
-	Payment to Bradma Ltd for Hand Addressing Machine	33.46
42	Secretarial & Editorial Postages	88.54
6	Fee to Southport Flower Show for Stand	5.00
-	International Fern Symposium Outlays	856.40
250	Transfer to Publications Account	200.00
	Sundry Creditors -	
-	Cost of Symposium Photos 15.00	
	Cost of Gaz V.10 pt 5 -	
493	ESTIMATED 350.00	365.00
	Balance at 30 June 1972 - ESTIMATED	172.39
		£ 1968.28

1972 30 June		£
	To Balance	172.39

PUBLICATIONS ACCOUNT

		£			£
1971			1972		
30 June	To Balance	767.00	30 June	Transfer to Ordinary Account	
1972				Cost 300 copies	
30 June	Transfer from Ordinary Account	200.00		Victorian Fern Craze	42.00
				Cost 260 copies	
				Beginner's Guide	37.66
				Cost reprinting old Gazettes	
				50 copies V.7 no 9	19.80
				50 copies V.8 no 2	18.80
				Balance at 30 June 1972	848.74
		£ 967.00			£ 967.00

1972
30 June To Balance £ 848.74

THE ANNUAL GENERAL MEETING - 7 OCTOBER 1972

The Meeting was held this year at the British Museum (Natural History), in London and was attended by 33 members. The Secretary reported we had another very good year with a continued increase in membership which has now risen to 410 after allowing for 19 resignations and lapsed members. Two recent deaths are reported with great regret, Tom Bolton and Conrad Morton, both prominent men in their respective fields of horticulture and botany. Obituaries appear in this issue of the Newsletter. We are pleased that the name of Bolton, one of the first to appear on the membership list at the birth of the Society, will continue with Robert Bolton who has taken over his father's large and fine collection of British fern varieties and has become a member.

This has been quite a remarkable year for meetings, for the numbers attending have greatly increased. Our programme has been a good one and we have enjoyed many most interesting outings. We hope the increase will continue and that next year's programme will attract even more members. One very important meeting was the International Symposium on Fern Taxonomy held in conjunction with the Linnean Society of London in April. This attracted many of the world's fern botanists and the several speakers had much to contribute to the subject of the Conference. The organisation was in the capable hands of Clive Jermy who is to be congratulated on an excellent job of work. Two other Society projects have progressed, the establishment of the fern collection at Capel Manor Horticultural Centre in the London Borough of Enfield and the development of our Spore Exchange - both are looked after by David Russell who has done excellent work.

After holding the Office of President for three years, Professor Irene Manton has retired. In spite of her busy life with its many commitments she made time to take a very active part in the life of the Society, and has become much better known to many of us. We are most appreciative of her interest in our affairs, and in thanking her we express the hope that she will still find time to come to some of our meetings. She has been re-elected a Vice-President, an Office she held before becoming our President. It is now the turn of a horticultural member to take office as President, and in Henry Schollick we have made a very good choice. He is well known to all our active members and we welcome him to the Presidency. The officers have all been re-elected with the addition of Tony Worland as Meetings Secretary, a new office separated from the Committee. Dr Chris Page has been co-opted as an additional Assistant Editor. The two retiring members of the Committee are Mrs E M Brightman and F J Tingey to whom we render our thanks for their services during their period of office. The appointments of Henry Schollick as President and Tony Worland as Meetings Secretary created a further two vacancies and we elected James Merryweather, Dr Barry Thomas, Major Richard Unett and John Woodhams to fill the vacancies, all of them very active participants in the work of the Society. James Crabbe, as an Assistant Editor, was co-opted on to the Committee.

Clive Jermy in his editorial report apologised for the delay in the publishing of this year's Gazette. This is due to several circumstances, first the Symposium which has taken up a great deal of his time, and then the difficulties in finding a new printer for a switch over to a cheaper method of printing, offset litho, which has posed some problems and caused delay. This has been necessitated by the continued rise in prices and our anxiety to keep the subscription amount at its present figure for as long as possible. Material for two issues of the Gazette has been deposited with the printers and Part 5, the issue for 1971/72, should be in our hands in November, while Part 6 for our year ending in June 1973 will, we hope, be distributed next Spring, thus bringing the publication date well back inside the year of issue.

The Society's Constitution was amended this year, and Paragraph 3, Management, sections 1 and 2 now reads - "The Officers of the Society shall consist of a President, up to six Vice-Presidents, a Secretary, Treasurer, Editor of Publications, and a Meetings Secretary. The Management of the Society shall be in the hands of a Committee consisting of not more than ten elected members with the addition of the Officers. Three members shall constitute a quorum. The Committee shall have power to co-opt additional members for special purposes, including assistants to the Secretary, Treasurer, and Editor of Publications". There has recently been some discussion on changing our name to the British Fern Society and notice was given to the Meeting that a proposal to effect the change would appear on the Agenda for next year's AGM.

Although we finished the year with a slightly increased balance in hand, our finances are no better or worse than last year. Subscription income is up, also the sales of old Gazettes. From the proceeds of these sales we have transferred £200 to the Publications Account, but we have been using the funds in this account to make purchases amounting to £118.26, thus reducing the nett transfer to £82. The balance of the amount of Gazette sales, £124, has been retained in our Ordinary Account, and is very much responsible for the final balance in hand. The Newsletter costs have again risen and this was inevitable, but we hope to contain the rising costs of printing the Gazette by the new printing method. Postages are a big item, but this is partly explained by the increase in the membership - the chief reason, of course, needs no explanation ! The purchase of a hand-addressing machine for £33.46 has been made necessary because it is becoming a mammoth task to address by any other means up to 500 envelopes at a time when sending out publications or other bulk communications. The Gazette cost is again an estimated one which we hope will not be exceeded by the actual figure.

MEETINGS 1972

Last year our Autumn Meeting took place after the publication of the Newsletter. It was held in the Lecture Room of the Chelsea Physic Garden, and attracted a record number of members - 47 in all. We were very pleased to have with us our President, Professor Irene Manton, taking a very active part in the proceedings. There was a talk with

slides by Christopher Fraser-Jenkins on his visit during the summer to the Balkans and the Caucasus Mountains, and Anne Sleep had on exhibit specimens of her find in Guernsey in the Spring of the new Asplenium hybrid, A. X sarniense. Before the Meeting began, members were able to look round the Gardens and see the ferns in the greenhouses. The Spring Meeting with an attendance of 29 was held in the Conversazione Room at the British Museum (Natural History). Unfortunately, it took place at the time of the electricity cuts, and as the Museum was scheduled for a "black-out" during the early half of the evening we had to finish the meeting by 6 pm. This curtailed our activities, but we were still able to hear a most interesting talk, given by Dr Trevor Walker of Newcastle-upon-Tyne University on the uses of ferns. This year's Autumn Meeting was held after the AGM in October, in the same venue, with 34 members and friends present, when we had an extremely interesting account by our retiring President, Professor Irene Manton, of her life among ferns. This made a most fitting "high-note" finish to her Presidency. She is a very able speaker, and I think the best tribute I can pay to her and her talk is to say that from my vantage seat at the table, I could not see a single listener looking drowsy, a - to me - unknown occurrence during meetings in the warm, sleep-inducing atmosphere of the Conversazione Room ! There were several exhibits round the Room, including plants, and a goodly number of fern books for sale. The visit to the Kew Fern Houses was again an enjoyable event which took place in May, and we were guided round by Professor Holttum and John Woodhams. Many interesting ferns were seen and commented on by our guides, and John produced plants of special interest in the Propagating House to enable the Professor to discourse on them - as he is very familiar with their native habitats and some were collected by him, his talk was very much enjoyed.

DAY MEETINGS

North Essex - 9 July We had a repeat of last year's meeting at Aldham near Colchester, with Vivien Green taking us to other parts of the area. We had the same attendance, 11, but not all the same members, and we were particularly pleased to welcome a young lady visitor from Poland, Dr Danuta Otlowska who was doing research work in this country. Vivien led us on a varied tour round Aldham, West Bergholt and Tiptree. The weather was good and we saw many ferns, including the rather uncommon ones for Essex, Polystichum aculeatum, P. setiferum, Asplenium ruta-muraria, A. scolopendrium, Oreopteris limbosperma and even several plants of Osmunda regalis.

Visit to Henry Schollick's garden at Oxford - 19 August The attendance at this meeting was a record for an outdoor meeting, 45 in all, including our host and his family. Not everyone came to the preliminary meeting at the Botanic Gardens in the morning and our visit there was not long - 11 am till 12 30 pm - but it enabled members to see round the gardens and through the glass-houses which the Curator kindly opened for our benefit. Unfortunately, the outdoor fern borders are not in good condition and are sadly troubled by an invasion of that intrusive fern Matteuccia struthiopteris which threatens to choke out many of the good ferns there. We were blessed with a perfect summer day for our visit and packed

lunches were enjoyed sitting on Henry Schollick's lawns, with wine, beer and soft drinks provided by our hosts. Later in the day we had a buffet high tea, and our most appreciative thanks are due to Henry and Peggy Schollick for so generously entertaining such a large party - it was no small task providing for 45 people ! The large collection of ferns and the many good varieties were of great interest to gardening members, and not a few went home with gifts of plants at the end of a very successful meeting.

WEEKEND MEETINGS

The Lake District - 21/24 April This meeting will not be found on our programme. It was arranged by Clive Jermy before the International Symposium held on 13/14 April to give our Canadian member, Dr Donald Britton, the opportunity to see Dryopteris assimilis - very early in the season, it is true, but we were lucky. We stayed at the Travellers Rest at Grasmere, and Fred Jackson led a Borrowdale visit on the Saturday to Thornythwaite Fell where we were able to find the fern already well grown. In the afternoon, Johnny Wood provided much Dryopteris interest. On Sunday, our first hunt was for Trichomanes speciosum in one of its Lakeland habitats, but the fern must be well hidden in some secluded spot and eluded our search. Although we would have liked to have seen it, we were glad to know it is not growing in some obvious place where its existence would be endangered by collectors. The afternoon was spent in Langdale and over the Wrynose Pass to the Duddon valley. Later, at the top of Windermere, one of the pleasures of the weekend was seeing a fine colony of Beech Fern with a mass of golden-brown rising fronds. As we expected, not many ferns were seen so early in the year, but Cryptogramma crispa was well advanced in sheltered places and also Dryopteris species in the woods, while, of course, Hymenophyllum wilsonii and Asplenium septentrionale were in full frond.

The Axe Valley, Devon - 2/4 June The season started off well with an attendance of 19 on this first meeting in the programme. Our centre was the George Hotel, Chard, an hotel which has seen many meetings of the Society over a long period of time, and indeed it was here in this hotel that I started my long association with the active life of the Society in the years preceding the war. Our leader, Martin Rickard, had done his "homework" well and took us to many interesting places. On Saturday, south-west of Chard, we visited a wet woodland at Bewley Down, well furnished with ferns, 14 species and 3 allies, among them a good variety of the Lady Fern, Athyrium filix-femina 'Percristato-digitatum' which was found by Martin. Later, at Turfmoor further south, we found a colony of Ophioglossum vulgatum. We hunted the lanes near Beckford Bridge - Polystichum lanes - and the variety hunter in me was pleased to see that even our more botanical young members were interested in the possibility of good P. setiferum finds ! Alas! none were found to whet their appetites ! At Wortheal we found 14 species, among them A. ceterach and one plant - the only one for the weekend - of Oreopteris limbosperma. On Sunday, near Hawkschurch, we tried to re-establish an old record for Phegopteris connectilis, but in vain. The wood seemed a very suitable

place for it but is extensive and the going was rough, so we did not preclude the possibility that the fern is still there. We found 14 ferns and one horsetail, Equisetum telmateia. There were some fine colonies of very typical D. carthusiana and we noted that D. pseudomas was abundant although the record in the Altas of the British Flora is a pre-1930 one. A short pause was made near Monkton Wyld to see the colony of D. aemula which has existed there for many years. There has been much development in the area, but I was pleased to see that the fern is still abundant there although not so much so as in the 1950's when Greenfield and I used to visit this habitat. At Dodpen Hill, a rough and muddy scramble brought us to a colony of Osmunda regalis tucked away in a plantation. Only 10 species were noted here, but among then was D. carthusiana, re-establishing a pre-1930 record. Members now began to leave for the homeward trip, and the few left made one last stop at Pilsdon Pen to see a colony of Lycopodium clavatum, found there on a previous visit by Hazel Rickard's young nephew.

Sedbergh, Yorks - 16/18 June The centre for this meeting was the Sun Inn at Dent, a small village tucked away among the hills near Sedbergh, where eleven members assembled on the Friday in lovely weather which seemed to promise a good weekend. Alas! Saturday was very windy and showery, and it continued to rain hard all the night and intermittently on the Sunday. Hunting around Dent on the afternoon of arrival produced 12 ferns, some on the village walls and others up a ravine nearby. Led by Fred Jackson on Saturday, we visited Cautley Beck with its fine water-fall Cautley Spout, a few miles north-east of Sedbergh. The ravine valley leading into the hills with its falls and cascades, is ideal for ferns and we recorded 20 species. The Aspleniums were there in large numbers, with most of the large ferns, as well as Cryptogramma crispa, Gymnocarpium dryopteris, Hymenophyllum wilsonii, Phegopteris connectilis, and Polypodium interjectum. In places we also noted A. viride and Cystopteris fragilis. In the afternoon, a few miles further on, we explored some limestone pavement at Fell End Clouds. Here, 12 ferns were seen, the Aspleniums and other lime-loving species abounding, including A. viride, Dryopteris villarii and G. robertianum. At Crosshaw Beck on the return journey 12 species were seen. On Sunday in hard rain, we travelled down Deepdale, south of Dent, to Garstock Beck Bottom where the waterfall was in full flood. More than the 10 species we found would probably have been noted if the weather had been fine. Stone House, further east, was next visited, and in dryer conditions we recorded 12 species. After lunch it was decided to finish the week-end with a visit to the old railway cutting in Ribblesdale which is always an attraction whenever we are in its vicinity. We added one more fern in the shape of D. abbreviata to our previous record of 15 species for this small area. The whole place was badly flooded, but this and pouring rain did not damp the ardour of our keen young members who explored the cuttings thoroughly, finding not only ferns but many other interesting plants. A feature of this weekend was the large number of new records for the Atlas, no fewer than 15 in all, of which 8 were made on the Fell End Clouds pavement.

North Wales - 30 June/2 July Len Beer and Dr Jeff Duckett led our party of 15 members and friends during this weekend, centred at the Waverley Hotel, Bangor. On Saturday, Len took us to Gerlan near Bethesda and we walked up the valley of the Afon Llafar to the cliffs below Carnedd Dafydd, known as Black Ladders. We expected more than the 14 ferns and 4 allies which we found but perhaps the cold wet weather had a discouraging effect on us. However, 8 of them were new records for the Atlas, Asplenium viride, Cystopteris fragilis, Dryopteris abbreviata, D. assimilis, Gymnocarpium dryopteris, Selaginella selaginoides, and surprisingly, Athyrium filix-femina and D. austriaca. On Sunday, Jeff led and took us to disused quarries above Ty-hyll near Capel Curig. Here we hoped to find A. septentrionale which is reported from here but we were unlucky. We saw 13 ferns and 2 allies, including Osmunda regalis and one of the Isoetes which was growing in a nearby reservoir. The weekend had a fitting finish with a visit to a fine colony of A. septentrionale which flourishes by the roadside in the Conway valley. This weekend also added many new records, 14 in all, to the Atlas.

Mayfield, Sussex - 11/13 August Only 9 members and friends, the smallest attendance this year, met at our centre, the Middle House Hotel in Mayfield. We travelled south on the Saturday morning to Old Mill Farm and hunted along footpaths and the disused railway line, returning to the cars along a stream through thick woodland. Although it was an interesting morning we found only 11 ferns and one ally, all of them common species. Rain started at lunchtime and we had a wet scramble through woods near Cox's Mill, about 2 miles from Punnetts Town. There is a record for Dryopteris aemula from here and we found the colony on a steep bank above the stream. Not far away was a flourishing colony of Onoclea sensibilis, obviously an escape from somewhere near, growing very happily in ideal conditions. Only 10 species were seen in the wood, and similar common ones were noted at our next stop in Darwell Wood at Cackle Street. Now the rain was coming down hard and we decided to make an early stop for the day. On Sunday in dryer conditions we returned to the same area and hunted along the River Dudwell - a very flattering name for a small stream - through Bingletts Wood. At first there was very little vegetation on the muddy clay through which we waded but ferns gradually began to appear and further on where the trees were more open and the ground less heavy we found them in abundance, including several colonies of D. aemula. A common fern was D. X tavelii, also D. carthusiana and two plants of Polystichum aculeatum were noted. After a quick return to Darwell Wood to check a record for Lycopodium clavatum - we did not find it - we went on to Saxonbury Hill to see the Hymenophyllum tunbrigense and D. aemula colonies there. We saw one large mat of the former on the rocks, and the latter was flourishing in a condition which I have only seen elsewhere in Arran. We recorded 10 ferns from here, all the others common ones.

Nottinghamshire - 1/3 September With 12 members and friends present, good weather and a very comfortable centre at the Star and Garter Hotel, Hazelford, Bleasby, this was a very successful meeting, even though we did not find Dryopteris cristata which was our main objective. Where it

should have been, we found instead Osmunda regalis, a new record for the Atlas, and only the second time it has been found in the county. Oxton Bog claimed most of our time but we found only 8 ferns, including D. X deweveri, the hybrid between austriaca and carthusiana. Very dry conditions in the Bog made our first discovery of the hybrid difficult to identify definitely, but in a damper spot we found more growing very strongly, showing up the hybrid characters well. Two following visits to woodlands proved most disappointing, and one of them entailed a most strenuous and exhausting scramble through thick bramble, well mixed with nettles and bracken. Clive Jermy did noble work in the forefront, beating out a trail for us - who better after his jungle experiences in New Guinea ! Our total record for the day was 12 ferns and 2 horsetails. In addition to the already mentioned O. regalis and D. X deweveri, two more new records were included, Asplenium scolopendrium and Polypodium interjectum. On Sunday we travelled further afield into Lincolnshire where several woods were visited, but bracken proliferated everywhere, and other ferns were scarce, although we did find in one wood, a good mixed colony of D. austriaca and D. carthusiana. We travelled as far north as Market Rasen but the chief value of the day was establishing the fact that the areas visited were very poor fernwise. We were very happy to have with us on this weekend our American members, Dr Rolla and Dr Alice Tryon from Harvard University. They added much of interest to our discussions, and I think I can truthfully say they enjoyed the meeting - even our Saturday scramble !

LONGER MEETINGS

Teesdale and Moffat - 21/30 July The weekend meeting at Teesdale was combined with the Moffat meeting which followed, so I shall treat them as one meeting. Our centre in Teesdale was the High Force Hotel, near the well-known waterfall of the same name in the valley below, which can be visited by a path down through the woods. We had a splendid turnout of 25 members and friends who, in spite of heavy rain and thick mist, cheerfully tackled, under the leadership of Chris Page, the long walk from Cow Green Reservoir which unfortunately was hidden in the mist, down the river to Caldron Snout, Falcon Clints and Holmwath. Well soaked by the rain, most of us did not indulge in fern hunting with our usual enthusiasm but nevertheless, we recorded 17 fern species and 7 allies, including Asplenium viride, Lycopodium clavatum, an abundance of Dryopteris abbreviata and a new record for D. assimilis. In the afternoon, in better weather, we hunted down the south side of the river from Wynch Bridge, searching chiefly for the rarer Equisetums. We found E. variegatum but not E. pratense which we had hoped to see. Ferns were not so numerous here and we recorded only 9.

The weather was dryer on Sunday and we explored the south side of the river near our centre. The north-facing wooded slopes by the river bank were very ferny and we enjoyed good hunting, finding 19 ferns and 6 allies flourishing in the sheltered habitat. Gymnocarpium dryopteris and Phegopteris connectilis were abundant where they could find room among the mass of the larger growing species, and on the rocks near the waterfall, A. trichomanes and A. viride were noted. Close to the water

we again found E. variegatum. Above the river on the higher slopes, was an extensive juniper forest and it was interesting to note the variation in growth between extreme fastigiation and very dense rounded forms. In the afternoon we went north to Weardale where our leader who specialises in the horsetails, was able to show us what, in his opinion, are the largest colonies of E. hyemale and E. pratense in the country. It was remarkable to see the former, a rare plant, as an invasive weed by the river bank and along the roadway where it had to be cut back to keep it in check. It was pleasing, too, to get an introduction to E. pratense along the banks of a stream, growing in masses, and to familiarise ourselves with the differences which distinguish this horsetail from E. sylvaticum which it closely resembles. On the way back, via Middleton-in-Teesdale, we visited Hudeshope Beck to see E. telmateia, and nearby we found Botrychium lunaria growing abundantly.

Most of the party departed for home after the Sunday meeting, but 10 of us moved on to Moffat on the Monday. Some of us travelled via Jedburgh and stopped at Minto Crags in quest of A. septentrionale which grows there. The approaches to the Crags are steep and overgrown and it was raining hard, but the fern, one small colony, was discovered by Tony Worland. We considered ourselves fortunate in stumbling across it in the course of an hour when we might have spent a whole day there without seeing it. On the Crags were extensive colonies of Polypodium interjectum, growing to a large size.

We were joined at Moffat by 4 more members and we all gathered in the evening at our centre, the Moffat House Hotel, to discuss our plans for the week. Our party of 14 included Bert Bruty, Jimmy Dyce, Fred Jackson, Clive and Alma Jermy, Bryan Makin, James and Margaret Merryweather, Martin and Hazel Rickard, Henry and Peggy Schollick, and Tony and Barbara Worland, under the leadership of Clive and Martin whose planning gave us a most interesting and enjoyable week. The fern we were keen to find was Woodsia ilvensis for which there are many old records for the area and on Monday we decided to explore a well-known old habitat, Loch Skene, in the hills above the very high waterfall, the Grey Mare's Tail, on the St Mary's Loch road from Moffat. It was a very stiff climb from the road to the high valley above the waterfall, and a long trudge to the cliffs at the far end of the loch where we spent the whole day and recorded in all 18 ferns and 9 allies. The common ferns were Cryptogramma crispa, Dryopteris abbreviata and Oreopteris limbosperma, and D. assimilis was fairly frequent. On the rocks Cystopteris fragilis was widespread and we noted several colonies of Phegopteris connectilis in the same habitats. A few plants of Asplenium viride and Botrychium lunaria were found, and an uncommon fern was D. pseudomas. On the slopes leading up to the cliffs Lycopodium alpinum was abundant, but not so L. clavatum which seemed to be more scarce, and Equisetum sylvaticum was also seen, as well as Gymnocarpium dryopteris at home in the screes. Growing in the Loch were E. fluviatile and Isoetes lacustris, and by the waterfall- and in other sheltered places Hymenophyllum wilsonii was seen.

As the weather continued fine, we decided to make the most of the

opportunity to concentrate on the high hills, so on Wednesday we spent the day in the glen of the Blackhope Burn, a few miles nearer to Moffat on the same road. This was a longer and more strenuous walk and we split up into parties to cover the cliffs on either side and at the end of the valley, in weather which was on the warm side for climbing. We had, however, a good team of our young energetic members and they were able to give good coverage to the more difficult terrain. We had a very good day, recording 21 ferns and 6 allies, again the most common being C. crispa, D. abbreviata, and O. limbosperma. It is not often we find abbreviata in such abundance and it was a good opportunity for us to familiarise ourselves with the distinctive characters which separate it from D. filix-mas and D. pseudomas. We noted that A. adiantum-nigrum seemed far from common in the area, but today in the steep ravine at Capplegill it was abundant, along with Polystichum aculeatum. More D. assimilis, also G. dryopteris and P. connectilis were seen, and on the rocks A. trichomanes, C. fragilis and a few plants of A. viride, together with both Polypodium interjectum and P. vulgare, and some H. wilsonii. We recorded 3 clubmosses, L. alpinum, L. clavatum and L. selago, also Selaginella selaginoides and E. sylvaticum.

We could not break away from this most interesting mountain area, and the following day found us back again, taking advantage of the good weather and exploring the Carrifran Glen which lies between our two previous hunting grounds. This glen is not so long so less effort was required to hunt right round the cliffs on the north side and far end, and for good measure we finished off the day by crossing over the top and returning down the Blackhope Glen. Plant life followed very much the pattern of the previous two days and we noted 18 ferns and 2 allies.

For 4 years Martin Rickard had hunted on these hills in vain for the rare Woodsia ilvensis, so it was most fitting that during our 3 days on the Moffat Hills, in a locality which advisedly, is known to a selected few, it was he who found the fern, 6 plants in all, growing in a secluded spot on high cliffs. It is so inconspicuous from the narrow standing space about 15 feet below, that Martin must have an additional sense where this fern is concerned. We congratulate him on his exciting find which made the week for him and for all of us.

After the days of hard climbing it was quite a relief for tired leg muscles to have a quieter day on the level ground on Friday. Alison Rutherford and Allan Stirling have been hard at work finding Polypodium australe in many localities in the south-west corner of Scotland, particularly along the coast, and in so doing have greatly extended the known northern limits of this fern. We had a rendezvous with them at Sandyhills on the Solway Firth for the afternoon, and in the morning on our way there via Dumfries, we stopped at the extensive Forest of Ae and hunted up the Water of Ae valley. This proved to be a rather mediocre fern area and we found only 14 ferns and one horsetail. D. carthusiana was abundant in very typical form, along with the other common woodland ferns, and both P. interjectum and P. vulgare, also H. wilsonii were seen. The horsetail seemed to be E. arvense and was of great interest

to the botanists as it was coning on the normally sterile stems and it was thought it may be a hybrid. Collected material was sent on to Dr Chris Page at Edinburgh Botanic Garden for research purposes.

On the coast we explored the Lot's Wife and other rocks behind the salt marsh. It was wet and muddy underfoot and dense undergrowth made the hunting difficult but we recorded 12 ferns, among them the 3 common Asplenia, A. adiantum-nigrum, A. ruta-muraria, and A. trichomanes, P. aculeatum, and for the first time growing in the wild in the same place, all 3 species of Polypody, P. australe, P. interjectum and P. vulgare. What we were very eager to see was P. australe, and it was there in plenty.

On Saturday our numbers were depleted, and while a few of our younger members spent another day in the hills in a vain search for more W. ilvensis, the rest of us travelled north on the Edinburgh road, past Tweed's Well, the source of the River Tweed, and followed the river down to Tweedsmuir where we met David McCosh, the plant recorder for Peebles-shire. We found very few ferns at this stop, but lower down the river at Polmood where we had permission to hunt in the estate grounds, a wooded valley leading up into the hills, we found ferns more abundant along a stream. We recorded 10 ferns and 2 allies, all of them the common kinds for such a habitat, including drifts of G. dryopteris. On the open ground beyond the woods were huge plants of D. abbreviata, a few of them beautifully crisped up to the standard of the cultivated 'Crispa'. At Mussfennan, our next stop, ferns were few but there was a fine colony of A. ruta-muraria on an old garden wall. Wrae Hill, with slate screes, appeared more interesting and 9 species were noted, including abundant D. abbreviata with G. dryopteris on the screes, and D. carthusiana on the shady ground below. We now retraced our steps to Tweedsmuir and up into the hills to Talla Reservoir, at the top end of which we found good fern ground and finished the day with some rewarding hunting up the Talla Burn with fine waterfalls and along the Gameshope Burn which produced 18 ferns and 3 allies. There were A. ruta-muraria, A. trichomanes, A. viride, C. fragilis, and on the open ground, Cryptogramma crispa. By the waterfalls G. dryopteris and P. connectilis flourished, and there was also a colony of H. wilsonii which was far from happy in the dry conditions which it has experienced this year. P. vulgare and P. aculeatum were also seen, the latter growing in the stone wall along the open road leading up the glen. O. limbosperma was common.

On our last day, the Sunday, a very much reduced party travelled down the Tweed Valley, following the route of the previous day, and on to Dawyk where we again met David McCosh who had obtained permission for us to explore the grounds of the estate which is well-known for its fine trees. In the gardens are many ferns, both British and foreign, the latter including Adiantum pedatum, Blechnum penna-marina, Osmunda cinnamomea, and Polystichum munitum, all growing happily in very congenial conditions. Among our natives of which we saw 12 species, were A. scolopendrium which did not appear to have been introduced, although it is not common in the area and was not seen elsewhere during

the Excursion, and Osmunda regalis, obviously an introduction. The most interesting fern seen was G. dryopteris, growing in the shade under the trees to the remarkable height of over 2 feet. The fronds were easily twice the size of any I have previously seen, and as the whole colony was of this size it would seem to be a particularly vigorous strain which has developed here, or been acquired from some other source.

Still following the Tweed, we moved on to Manor Foot, where Manor Water joins the River, and during lunch the rain started, but after a whole week without any when it could have marred our hill-climbing, we could not grumble. A very short and quick hunt here produced A. ruta-muraria and C. fragilis on a bridge, then we continued on our way to Neidpath Castle. There is an old record for A. septentrionale growing on the Castle walls, but they are too well looked after and doubtless the fern perished long ago; only O. limbosperma, and on a wall near the Castle A. ruta-muraria, were seen. The rain was coming down hard when we went our separate ways from here, after thanking David McCosh for his great help during the last two days of the Meeting.

THE LAKE DISTRICT - 16/23 September On Saturday, 16 September, at our Centre, the Bridge Hotel in Buttermere, 18 members and friends gathered for our Annual Excursion. They were Hedley and Coreen Bellringer, Marjorie Castellan, Jimmy Dyce, Alf and Ray Hoare, Fred Jackson, Reg and Marion Kaye, Margaret Kingston, Bryan Makin, Rose Moss, Martin and Hazel Rickard, Henry and Peggy Schollick, and John and Annette Schollick. We were joined later in the week by Geoffrey Gilbert, Jim Jackson and Bob Trippitt. It was a very real pleasure to have Jim Jackson with us again, home on holiday from Australia, and it brought back memories of Lakeland excursions when he and his father used to climb the crags, hunting in places where none of us dare follow.

Fred Jackson was our leader and on our first day, Sunday, he took us to the Honister Pass area which was practically on our doorstep. From Gatesgarth we walked up Warnscale Bottom, some of us working the screes along the east side, and others going on out of the Bottom and on to the high ground below Fleetwith Pike and across to the cliffs above the Pass. They explored quarry workings and tunnels and noted 16 ferns and 3 allies which were much the same species as found by the party remaining in the Bottom, except that they saw Cystopteris fragilis in greater abundance, but did not find Polystichum aculeatum, Hymenophyllum wilsonii and Lycopodium clavatum. Our list comprised 18 ferns and 4 allies, of which a large number were seen on the screes, the common ones being Cryptogramma crispa, Dryopteris abbreviata, Gymnocarpium dryopteris and Oreopteris limbosperma. A few plants of P. aculeatum were seen in a damp hollow, including one unusual plant with entire deeply indented and spinose pinnae, seemingly a form of 'Lonchitioides'. It was noted, however, that some dead fronds of the previous year were more normal in appearance, so this may be some kind of damage variation, although the plant was a flourishing and vigorous one with a large number of fronds and did not appear to be in any kind of trouble. The G. dryopteris was very abundant as the dwarf small-fronded kind which grows so happily on dry stony screes.

A deep ravine at the head of the Bottom was explored, a task made very much more easy because of the dry conditions this year which have reduced considerably the volume of water in all the hill streams. Here we saw Asplenium viride and C. fragilis, but neither in abundance. In the damper spots was H. wilsonii and many small colonies of Phegopteris connectilis. Emerging from the ravine we crossed the hillside where, on the open slopes, L. alpinum and L. selago were in great abundance, but only a few plants of L. clavatum. Further round, the water from Black Tarn descends in a very deep inaccessible ravine with some high waterfalls. From the bottom we could penetrate for a short distance as far as the first fall and in the very sheltered and humid conditions were sheets of H. wilsonii and some A. viride.

On Monday we went over the Honister Pass to Borrowdale, and visited a well-known fern area, Johnny Wood, which has over a long period of time been a fertile hunting ground for our Society during our meetings in the Lakes. It has always had a good reputation for Athyrium filix-femina, and many interesting varieties have been found there in the past. In recent years, the wealth of Dryopteris species, and an abundance of ferns which used to be included in the "dilatata/spinulosa" complex, have attracted our attention, and our botanists have found much to interest them in the many ferns which appear to be hybrids. We found many plants of very typical D. assimilis, and had lengthy discussions on several ferns which seemed to combine the characters of austriaca, carthusiana and assimilis. A very enjoyable morning was spent in the Wood and 16 ferns recorded. In addition to those already mentioned, D. abbreviata, D. filix-mas, and D. pseudomas were common, as well as H. wilsonii, G. dryopteris and P. connectilis. In the afternoon a visit was paid to Castle Crag to see A. septentrionale, and in the nearby village of Grange we were able to show some of our newer members the Ceterach officinarum which grows on a wall there, as well as a very fine colony of Polypodium vulgare with very divided fronds.

Near Buttermere, Sourmilk Gill drops down from Bleaberry Tarn through a very steep stretch of woodland facing north-east, and this seemed a promising place to visit on the Tuesday morning, but, surprisingly, we found very few ferns there. The wooded hillside is very rocky, and the stone, granophyre, would appear to be a very inhospitable host to most pteridophytes. Low down, only the ubiquitous bracken and a fair amount of O. limbosperma grew, with the odd plant of a few other species, and on the high ground only D. austriaca was at all common, but we noticed a few small colonies of G. dryopteris and P. connectilis. There was plenty of humidity in the wood, as was demonstrated by the fact that in one place the trees were literally festooned with Polypody to a great height, but in the deep crevices between the boulders which one would expect to find full of ferns, only mosses flourished. One most notable thing about this wood was the super-abundance, in a narrow belt about half-way up the wooded slope, stretching along the hillside for some distance, of H. wilsonii, covering every rock and stone with luxuriant growth. Above and below there is no trace of the filmy fern and it

appears that just in this belt does it find the granophyre acceptable for its growth. In the afternoon from Hassness on Buttermere, we hunted up a deep gill to Goat Crag, scrambling up the deep ravine which in a normal year the volume of water would have made impassable. There was not an abundance of species here and we noted 11, most of them the more common ones. It seemed an ideal habitat for H. wilsonii, but only one small patch was seen, also a few colonies of P. connectilis and P. vulgare. Climbing out of the ravine high up on the steep rocky hillside, we enjoyed an exhilarating scramble to the safer ground lower down.

We went further afield on Wednesday, to the Forestry Commission woods east of High Lorton. Through them runs Aiken Beck with an impressive waterfall named Spout Force, a very ferny place where, for the first time during the week, we saw A. scolopendrium, only a few plants, and with them, A. trichomanes and H. wilsonii. On the bridge, by the road, A. adiantum-nigrum and A. ruta-muraria grew, and in a nearby overgrown ravine, difficult of access, very large-growing A. filix-femina was a fine spectacle in a lush habitat where all the 11 species seen were very vigorous. H. wilsonii and many drifts on the almost perpendicular banks, of G. dryopteris and P. connectilis were flourishing, and on the trees P. vulgare was rampant. Over Whinlatter Pass and north from Braithwaite, our next stop was at Barf, a hill at the south end of Bassenthwaite Lake. Above the screes on the hill is a whitewashed pinnacle of rock called The Bishop, and not far from here A. septentrionale grows abundantly in the crevices of the rotten slate. Some of the plants seen were very large and vigorous, and accompanying them were A. adiantum-nigrum and A. trichomanes. In the wooded ground around the bottom of the hill, ferns abounded, including D. carthusiana and H. wilsonii. We returned to Buttermere over the mountain road via Newlands Hause, and on the way stopped at Stoneycroft Gill where, in mining excavations, A. viride grows, along with A. adiantum-nigrum and A. trichomanes.

There was rain in the night, the only wet weather we had during the week, but after breakfast on the Thursday it cleared again, and over in Borrowdale where we spent the day, none had fallen. We were a very much reduced party as several members had gone off for the day on quests of their own. We spent the morning climbing up Cat Gill at the south end of Great Wood on the eastern shores of Derwentwater, and again the dry conditions enabled us to use the stream bed for our climb. We enjoyed a good scramble up the gill to its emergence high on the hillside at the top limit of the trees. We found 17 ferns, most of them the more common ones, but among them A. adiantum-nigrum, A. ruta-muraria, A. trichomanes and C. fragilis on the high rocks where also P. aculeatum appeared in large numbers. Lower down in the more sheltered places, H. wilsonii and P. connectilis were seen in small quantity. A good A. filix-femina variety with very incised and lacerated pinnules was found, but only spores were collected. In the afternoon we again climbed up through the Wood, further to the north to a high ravine, known as Lady's Rake. Our route was up steep stony screes in which G. dryopteris was widespread, and all over the hillside, wherever the woods thinned out, a dominant fern was D. abbreviata. The woodland ended at a line of very high

precipitous cliffs, at the foot of which ferns flourished, most of them similar to those seen in the morning, with the Aspleniums, C. fragilis, and H. wilsonii on the rocks, P. connectilis in damp crevices, and some O. limbosperma in open places. No P. aculeatum was seen, but a fern recorded for this place which we were keen to find was P. setiferum and it was there in large numbers in only a small area along the foot of the cliffs. Before returning to Buttermere, we visited Keswick to see a colony of A. trichomanes 'Cristatum' which grows on a wall there. The fern has been badly punished by the dry summer but was still flourishing and recovering from an attack made on it a few years ago by the ladies who own the wall and had, to our consternation, "weeded" it ! We took pains at the time to explain to them the precious nature of their "weeds" and now they take a real interest in the colony and nurture it.

Our last day, Friday, was spent on flatter ground, but, none the less, still in arduous conditions in a series of old quarries, some limestone and some sandstone, in Brigham near Cockermouth. They are very much overgrown by vegetation and are, of course, the dumping ground for all the old beds and other rubbish in the area, not to mention stretches of water and muddy bog, none of which made for easy exploration. Ferns were not very prolific in numbers of species and only 8 were recorded - this included A. ruta-muraria and A. trichomanes on walls outside the quarries themselves. A. filix-femina, D. austriaca and D. filix-mas were the common ones, growing well in the sheltered conditions of the habitat. There was a good colony of P. setiferum, and, most interesting of all, abundant A. scolopendrium with one large colony of a ramose variety. Specimens were collected but still the colony is not depleted. A marginate variety was also collected. Some of our party went on to Mosser, north of Lowes Water, in the afternoon and here again, among other ferns, A. scolopendrium was seen, also C. officinarum. To finish the day, and the Excursion, a brief visit was paid to St Bees Head on the coast where A. marinum was widespread on the rocks.

CORRECTION

PLEASE NOTE that in Newsletter No 9, in the Builth Wells Excursion Report pages 14 and 15, the two records for Dryopteris assimilis from Craig Cerrig-gleisiad and Devil's Bridge were included in error and should be deleted.

INDOOR FERN NOTES

by H J Bruty

Pteris This is a terrestial fern, very easy to cultivate and it will grow in a temperature of 45 to 50 degrees Fahrenheit during the winter months. It is a large genus of about 250 species from a wide area of the world, ranging through tropical, subtropical and temperate regions. They are used a lot in decorative work but are little use when potted above 6 inch pots. They differ in height from a few inches up to 6 feet, and Pteris tripartita which is widely distributed in the tropics will grow even taller if planted in a bed and allowed a free rootrun. Some species develop two types of fronds, the fertile ones being more erect

and quite distinct from the sterile ones. Others produce stiff spines at the base of the fronds when mature, such as P. intricata from West Tropical Africa. A compost of 2 parts peat, 1 part loam and 1 part sand with a John Innes base fertiliser will suit most of them. To keep the plants looking fresh and green, they can be fed once a week with a nitrogenous liquid fertiliser, such as Solufeed.

Spores can be sown towards the end of February in a temperature of 65 degrees F, and the sporelings can be grown on into 5 inch pots by the end of October in the same year. When large enough to handle they can be pricked out into small pans, 3 or 4 together - in this way plants of a reasonable size can be produced in the shortest possible time. As they mature very quickly, it is advisable to raise a fresh batch from spores annually. The best time to gather the spores is when the sori which are marginal attached to the edge of the leaflets, are black. It would seem that some, at least, retain their germinating powers well, for there is a record that in 1876 some 7 year old spores of P. quadriaurita 'Tricolor' produced a splendid crop of plants which in one season developed into perfectly healthy and robust specimens.

P. cretica is a well-known species and very useful for decorative work, also its multifid forms 'Distinction', 'Rivertoniana', and 'Wimsettii'. P. cretica 'Albolineata', P. dentata, P. tremula, and P. vittata are also good. A very fine multifid variety is P. cretica 'Childsii', but it does not bear spores and has to be propagated by division. When young P. aspericaulis has bright red fronds but is difficult to cultivate. The variegated forms P. ensiformis 'Victoriae', and P. quadriaurita 'Argyraea' require more shade than the others.

If propagated annually few pests attack these ferns, and the most common, aphides, can be controlled by nicotine fumigation, or spraying with a weak solution of Diazitol, a half ounce to 2 gallons of water.

A HAPPY EXPERIMENT

by Reginald Kaye

The Aspleniums and Ceterach have always been rather difficult to establish successfully in gardens from collected plants, though when available, young pot-grown plants raised from spores usually settle down fairly well. They do not make good pot plants after their younger years and it is but seldom that one sees a really good Asplenium ruta-muraria well-grown in a pot. Problems also arise when trying to imitate their usual habitats in old walls on vertical faces. Having found flourishing colonies of both the Wall-Rue and Rustyback growing on the flat in an old quarry near me in very thin layers of rubble over the solid rock, I tried these plants out in a gently sloping scree composed of 75% lime-stone chippings and 25% soil, much of the latter having washed down leaving one to two inches of clean chippings on the surface. To my joy both species settled down at once and have grown steadily ever since. A hole just big enough to take the roots was all the preparation given, and no extra soil or feed was introduced. Larger clumps of the Wall-Rue have been divided and replanted without loss, and once watered in they look after themselves with no further attention.

BRITISH FERN VARIETIES - The Scolopendriums by J W Dyce

Over the years the name of this fern species has been changed several times - Scolopendrium vulgare, Phyllitis scolopendrium, and now back to Linnaeus's name Asplenium scolopendrium. There is no doubt there is a strong affinity to the Aspleniums, as shown by the fact that they hybridize - the best known of the hybrids is A. X microdon found in Guernsey, a cross between A. billotii and A. scolopendrium. Yet, the Hartstongues, to give them their common name, are a race apart from the rest of the genus, with their own distinctive appearance and different way of life. They are much larger, on the whole easier to grow, and in marked contrast to the other Asplenia, extremely prolific in variation, and it is this trait which has endeared them to the grower, making them one of the most important of our garden ferns. For a plant with such a simple structure, a plain strap-like frond, it has a remarkably wide range of variation, although not everyone is enthusiastic about some of the forms this assumes. Today, worthwhile varieties of the Hartstongues are more commonly found in the wild than of any other species, both in the north and the south of the country. In the garden too, self-sown sporelings can be found which equal the best-known varieties. Reginald Kaye's 'Laceratum' is a case in point, being found fully grown and quietly flourishing on a wall in the nursery, but quite overlooked till on one of my visits I drew Reg's attention to it. Very little use seems to be made today of the propensity for the spores of good fern varieties to produce even better forms, and I think the "Scollies" could be most rewarding in this way.

One type of variation which stands out as superior to all the others is the 'Crispum' section. In this the frond remains entire but is deeply pleated or goffered up each margin, with the undulations, in the best forms, so deep and close together as to resemble the ruffed collar associated with the Elizabethan period of dress. The best which we grow today is undoubtedly 'Crispum Nobile Bolton' a wild find by Thomas Bolton on Warton Crag near Carnforth in the early years of the century. The fronds are very wide, deeply and closely ruffed, and dark glossy green in colour. Another commonly grown one is 'Crispum Speciosum' with narrower fronds having a yellowish tinge. This was found by Moly and in the early issues of the Gazette was claimed to be the best of the plain crispums, a gigantic grower with very deep pleats. Many others are mentioned in our early literature, but it is unfortunate that no one these days seems to be able to name any others with any confidence. Be that as it may, any of the good crispums is a plant to be proud of, named or not named. This section of the Scolopendriums is recognised as the plumose form, and as with plumosums in other genera, is quite barren. There was one exception among the first-raters which I remember seeing many years ago, but I do not know if it is still in existence - it could be a most useful breeder, if anyone has it. I have seen two crispums found in recent years, one by Peter Corbin in Devon and the other by Robert Trippitt on the limestone in the north of England. They are both good forms, although not approaching 'Nobile Bolton' in depth and closeness of pleating, but they show that this variation still exists in the wild today both in the north and the south.

The most common type of variation in the Scolopendriums is 'Cristatum' in which the frond apices are divided, sometimes simply bifid, and with all stages in between to very congested tasselled forms. This can be a very inconstant variation, and good crested plants can be collected which, the following year in the garden, revert completely to the normal with not even the slightest trace of a divided tip, and they remain normal although some years such a plant may make a half-hearted attempt at cresting. There are so many good cristatums in cultivation, and still being gathered from the wild that individual naming is not to be encouraged - if you find a superlatively good one it would be worth calling it 'Cristatum' followed by your name or the place where it was found, otherwise 'Cristatum' is ample, and you can get an excellent selection under this umbrella name. Other names which you will see in literature and which are, in effect, synonymous with 'Cristatum' are 'Glomeratum', 'Grandiceps', and 'Multifidum'.

Reverting to 'Crispum' this can also be got with cresting, but again no named varieties have come down to us and they are called 'Crispum Cristatum' only. A very beautiful form is 'Crispum Fimbriatum' in which the ruffing is finely broken up into delicate fringes. Druery's British Ferns and their Varieties, and Lowe's Our Native Ferns depict a very fine one named 'Stansfieldii', but I do not think it can exist today. Certainly, Reginald Kaye does not mention it in his book Hardy Ferns. It is interesting to record that this variety with its deep pleating and long tenuous fringes was raised from a very ordinary-looking 'Undulatum' with much more open and shallower pleats than any 'Crispum'. Undulate forms, good and indifferent, are fairly common wild plants so there is scope here for the grower interested in breeding. 'Crispum Fimbriatum Drummondiae' is the only named one still existing - to our knowledge - and this is heavily tasselled in addition to its finely divided pleating. It is a first-rate fern which, when well grown, requires a raised pot to show off the beauty of the fronds, pendulous with the weight of the cresting. The fimbriate character also exists on its own, and an allied form is 'Laceratum' of which the best is 'Laceratum Kaye', referred to earlier in this article, with short broad fronds deeply and irregularly incised.

Other variations with more of a curiosity value than real beauty, are 'Marginatum' and 'Muricatum'. The former has a raised fleshy ridge down each side of the frond, sometimes on the front surface but more often on the back. The parts of the frond beyond the ridge are usually lacerated or undulate. 'Muricatum' has very rough-surfaced fronds quite lacking the polished green of other forms, and sometimes this character is found combined with the marginate one. The old collectors possessed a large number of other varieties, ringing the changes on the types I have already mentioned, some good, some indifferent, and some plain bad, but I have covered those which the grower today will wish to acquire.

Now we come to another kind of variation, 'Ramosum', which again is really an umbrella name for a wide range of plants with a diversity of names. In these the fronds branch repeatedly, in extreme cases so often

that the plants are congested balls of foliage. The ramose character is, in effect, an extension of the cresting habit, except that it commences lower down the frond instead of restricting itself to the apex. None are very tall-growing, and in the simplest forms the fronds are divided 3 or 4 times from a point about one third to one half of their length from the base of the rhachis and each of these divisions carries a crest, ranging from fairly simple to very elaborate. The blades of the divisions are usually quite plain, but in some cases are so narrow as to be almost non-existent, and the crisped and marginate characters are also to be found. One can appreciate that some of the ramosums can be very beautiful, but others quite the reverse. The names used in the past, too, are as diversified as the plants, and a few of the more common - and semi-umbrella ones - are 'Conglomeratum', 'Corymbiferum', 'Glomeratum', 'Multifidum', and 'Ramo-cristatum'. These names have now fallen into disuse, and although I grow a good selection, including some collected by myself, I regard them all as 'Ramosum'.

There are several other minor kinds of variation in this most versatile fern, but I think all the worth-while ones are mentioned above. Lowe, in his useful little book, British Ferns and Where Found, lists 445 varieties, which well indicates the amount of imagination used by the collector of old in his desperate urge to swell the numbers in his collection. How he could possibly remember them all, I do not know, and the paucity of names today is, no doubt, a reaction to the naming mania of those days !

ON LEAVING THE FERNS BEHIND

by F J Healey

We have moved house and left most of the ferns behind. Leaving ferns behind, like leaving the pond with its fish, is a sort of betrayal. One knows they won't survive unless someone understands their needs and attends to them. But one cannot have the bungalow and the easier garden without leaving the bigger place and much of what went with it; and at the end at least I had the good fortune to be visited by fern friends from notable gardens, who loaded their cars with acquisitions.

Members interested in the past of our Society may be interested to know that some of these ferns, from Taylor's Lily Hill Nursery, derived from those great fernists, Dr Stansfield and Mr Henwood, of Reading. James Taylor, my wife's father, a Scot, came south to be head gardener to the Duke of Connaught at Bagshot Park. He left about the turn of the century to become a nurseryman in partnership with a local bank manager. Mr Henwood was related to the bank manager and soon appeared at the nursery with Dr Stansfield, along with ferns, spores and surplus seedlings. My wife's father and his foreman were fern-proof, but my wife, when she joined the business, took on the ferns. By this time though, Dr Stansfield and Mr Henwood were getting very old and my wife was too busy to cultivate her acquaintance with them. She did, however, visit their gardens. The Doctor kept a good collection going but with economy of effort. Mr Henwood was a thorough cultivator. His special care was his polypodies which he grew splendidly on shelving in a small

house in his small town garden. I myself have only the faintest recollection of the two of them on a visit to the nursery some thirty-five years ago, and of their departure in a small two-seater and a flurry of white beard.

The only other fernist neighbour we had near Bracknell was the late Maj-Gen Sir Alfred Knox who kept up a beautiful small country house at nearby Binfield. He had a pleasant tree-shaded fern dell with everything identified by labels in which he took a pride. His meticulousness extended however to raking up the labels with the dead leaves each Autumn, in the confident hope that Mrs Healey would reset them correctly next growing-season. He allowed us to do what replanting was necessary, and to take the surpluses - with the exception of Athyrium filix-femina 'Clarissima' which Dr Stansfield, in giving it him, had indicated as a special treasure.

Every fern nursery has difficult, even tragic, times when drought or storm or snow wrecks hopes, so it was with relief, as well as some regret, that we were able, some eight years ago, to get out of the nursery. We made ourselves a fernery in our pine and birch woodland garden at Ascot. Our stay at Ascot was a short one and when we moved on to Goring-on-Thames we had small hope of creating fern-conditions in a new garden where the soil was largely excavated chalk, pushed from elsewhere against the northern side of an ancient field-hedge. The sunlight at Goring seemed brighter than in East Berks and the Chiltern chalk seemed to breed a fiery quality in the air in hot weather. But we barrowed the subsoil away and brought in better, mulched with scores of bags of half-decayed beech-leaves from local woods, and ultimately had the ferns growing as well as is possible without provision of top shade.

Polypodies did quite well, so did lastreas (dryopteris). Acutilobe varieties of polystichum were doubtful but divisilobes did better than at Bracknell. Scolopendriums tended to die in winter. Osmunda did well beside the pond where that lime-hater Onoclea sensibilis soldiered on, dwarfed but strong, long after Matteuccia struthiopteris had disappeared. Adiantum pedatum survived the cruel attentions of snails and slugs and A. venustum thrived mightily. Lady ferns did well enough; 'Victoriae', 'Frizellae', 'Clarissima' and a strong fringed form I raised from it were good. The minor ladies, those which ask to be cossetted, never came to much but I appreciated the efforts of a gemmatum-type of my own raising.

Well, there it is. We have moved house and left most of the ferns, but in another sense have come home and brought ferns with us. South Stoke, the Thames-side village in Oxfordshire where we are now settled, is the village from which the late Rev E A Elliot secretaried our Society and edited its Gazette through the difficult post-war years, when there were hardly any but he, Percy Greenfield and Jimmy Dyce to hold the few together. It seems to me proper that a member should live here, grow some fern varieties and be prepared to show fernists the places associated with our Mr Elliot. Perhaps I can claim some special qualification, since I have been associated with the village for nearly six years as clerk to its parish council, of which Mr Elliot was formerly a member.

THE RAREST FERN IN BRITAIN

by M H Rickard

When a small colony of Woodsia ilvensis was found on a recent B.P.S. excursion to Moffat the question arose - which is the rarest species of fern or ally in the British Isles. No one present could confidently select any one species and the subject remained unresolved. In fact, historically, it appears that few authors have attributed the title to any one species, Moore 1863 in British Ferns and their Allies being a notable exception when he chose Cystopteris montana. In this article I have attempted to outline the known distribution of the rarer species in order to suggest, tentatively, which species may claim this questionable honour.

Watson in Topographical Botany (1883) recognised 12 species limited to 10 or fewer vice-counties -

Adiantum capillus-veneris	(8 vice-counties)
Athyrium alpestre	(10)
A. flexile	(4)
Cystopteris montana	(3)
Dryopteris cristata	(9)
D. villarii	(6)
Isoetes echinospora	(6)
Lycopodium complanatum	(4)
Ophioglossum ambiguum	(3)
Trichomanes speciosum	(4) - not including Ireland
Woodsia alpina	(3)
W. ilvensis	(8)

In addition there are a further 6 rare species unknown to or ignored by Watson -

Anogramma leptophylla
Asplenium onopteris
Cystopteris dickieana
Equisetum ramosissimum
Isoetes histrix
Ophioglossum lusitanicum

Some of these species have no claim to rarity in the light of increased knowledge gained since Watson's time, many being under-recorded or locally plentiful.

Under-recorded species Species have been under-recorded due either to difficulty in segregating critical species or their small size, or both ! Of critical species Ophioglossum ambiguum and Isoetes echinospora have been shown to be widely distributed throughout western Britain (Atlas of the British Flora and the Critical Supplement). NMore recently Cystopteris dickieana, classically restricted to sea-caves in Kincardine, with one or two outliers inland, has been shown to occur in scattered localities in other parts of Britain - apparently the basic criterion for recognition of this species (as with Isoetes echinospora and I. lacustris) is the structure of the spore wall (Jermy and Harper in the British Fern Gazette 1971), it often being macroscopically unrecognisable. One other critical genus still in need of investigation

is Lycopodium; it seems that either L. complanatum or L. issleri, or both, occur in the British Isles but unfortunately, their distribution is very imperfectly known. There are two species which tend to be overlooked due to their small size - Isoetes histrix and Ophioglossum lusitanicum. Both species are fortunately quite plentiful in their known localities on Guernsey *(It is doubtful whether this is still true where O. lusitanicum is concerned - Editor.)*, or in the case of the Isoetes, on Guernsey and the Lizard Peninsula.

Locally plentiful species Several species have few localities but are plentiful where they occur -

Cystopteris montana locally common on several Scottish mountains, e.g. Ben Lui.
Dryopteris villarii frequent on limestone in the north of England, e.g. Hutton Roof.
Athyrium alpestre abundant on many Scottish mountains, e.g. Bidean nam Bian.
A. flexile apparently limited to four Scottish mountains but plentiful on at least one of them, e.g. Ben Alder, where it was recently recorded by the Secretary among others.
Asplenium onopteris locally abundant in the south-west of Ireland, and possibly in south-west England.

The remaining species must all be considered very rare, but several are plentiful in some of their localities -

Adiantum capillus-veneris several large colonies, particularly in Cornwall and west Ireland.
Woodsia alpina locally frequent on several mountains in the Breadalbane range of mountains in Scotland, but very rare elsewhere.
Dryopteris cristata abundant on Horsey Marsh Nature Reserve, but extremely rare in many of its outlying localities. I have only been able to find 3 plants in Suffolk this year.

The remainder are more restricted -

Anogramma leptophylla occurs on the Channel Island of Guernsey where it is tolerably plentiful in at least one locality, or so I am informed by our Secretary, and Jersey where five localities were described by Marquand in the Flora of Guernsey.
Equisetum ramosissimum is confined to the artificial bank of the River Witham near Boston and is questionably native; it is reported to be locally plentiful in this limited area although it is impossible to determine the number of plants due to its creeping method of growth.
Trichomanes speciosum occurs in a few places in England (2), Wales (2), and possibly Scotland, but is still extant in 9 separate 10km. squares in Ireland (Atlas of the British Flora), and is probably under-recorded there. However, if Ireland be excluded from the area under consideration, T. speciosum would probably be the rarest British fern.
Woodsia ilvensis I may be rather biased about this species as I am more familiar with it than most others, but it is so rare that it is possible to estimate the number of plants now known to survive in the wild -

c. 20 plants in 3 separate Snowdonian sites
c.100 " " 1 Lakeland site
c. 30 " " 2 sites in Central Scotland
c. 10 " " 1 site in the Clova Mountains
in other words, fewer than 200 plants in the country altogether, although of course, as with all species, more localities may exist.

I therefore believe Woodsia ilvensis to be the rarest British fern.

If anyone can contradict the brief distributional outlines given here, or disagrees with my final choice of species, I shall be very interested to hear from them.

NEW FERN VARIETY FINDS

by J W Dyce

No report appeared under this heading last year since so few finds were notified to me, but now I have quite a long list. Many have come my way from non-members who, on finding an unusual fern, have made enquiries about the Society and sent me fronds for identification, and sometimes part of the collected plant. A very small number of members let me know when they find good ferns, and I repeat again my request for this information so that it can be recorded in the Newsletter for the benefit of all members.

In my article in this issue on the Scolopendriums I mention that wild finds of this fern are more numerous than of any other species, and the list before me certainly bears this out, for out of 14 new finds 6 are "Scollies", so I shall start off with these. Crested varieties are fairly common and usually passed by unless they look especially good. One such was found by Martin Rickard last year in a limestone crevice during our Settle meeting and is growing well with him. A few finds of 'Ramosum' have been made, and a very good one must grow on a wall in Exmouth, judging by a frond which was sent to me for naming. Another excellent one was shown at Southport Flower Show this year by Robert Trippitt who collected the plant near Lupton in the Kirkby Lonsdale area and he calls it 'Ramo-cristatum Lupton'. Many similar plants were found by us on an old quarry wall this year during the Lakes Excursion, and specimens collected by several of us did not by any means clean out the colony which consists of a large number of plants of all ages, so presumably it is breeding true from spores in a habitat very much to its liking, a thing which very seldom happens in the wild. Most of the plants are very much alike, and all very good with fronds up to 3 times divided and adorned with wide fan-shaped heavy crests. From the Burren, Co Clare in the west of Ireland a frond was sent to Clive Jermy at the Museum this year and I identified it as 'Sagittato-projectum', a variety with projecting basal lobes and deeply cut margins. Another fine plant shown at Southport by Robert Trippitt was a very good 'Crispum' found by himself - while not up to the standard of 'Nobile Bolton' it is nevertheless a first-rate plant with deep pleating, and a find to be proud of.

Another fern showing variation in the wild which we often come across during the Society field meetings, is Dryopteris filix-mas. Specimens with crested pinnae and/or crested apices are frequently seen but very

few are of a quality worth collecting. Barbara Tingey found a fairly good 'Cristata' last year, and recently I had a frond from Kay Stevens of quite a good 'Digitato-cristata' found by her at Copthorne in Surrey. It is tall-growing with long-fingered crests on the pinnae and large multifid apices, and should make a fine garden plant. D. abbreviata is a fern which we have seen much of this year, and during the Moffat meeting we found one or two huge clumps of a crisped variation which again makes a good plant for the garden. I have several of them found over the years, and the strong upright dark-green fronds with the crisped pinnules always look very handsome.

Two good Athyriums have been found during the meetings this year, the first by Martin Rickard at the Chard meeting, 'Percristato-digitatum' with fingered cresting on the pinnae and minute cresting on the pinnules. The other was found during one of our scrambles up Lakeland gills, an 'Inciso-fimbriatum' of which fronds were collected for spores. None of us seemed to have the energy to collect a crown from the plant, but on studying the fronds more closely since my return home I am now sorry we did not do so. The pinnules are deeply incised to the midrib and the pinnulets are developed into fine hair-like divisions at their ends.

Another interesting find during our recent visit to the Lakes, again by Martin Rickard, was a very intriguing variety of Polystichum aculeatum showing the characters of 'Lonchitioides' with entire pinnae, deeply incised and very spinose. It was a big plant of several crowns and a large number of fronds about 18 inches high all showing the same variation. Yet, some of last year's dead fronds seemed to be normal aculeatum, and there is no indication that the plant has been damaged in any way to cause a frond outline change this year - this year's dry weather conditions may have something to do with it. It will be very interesting to see what happens to it next year under cultivation.

Two Polypody fronds have come my way this year, one from Alison Rutherford of a variation with bifid fronds, bifid pinnae and good well-divided large crests - a suitable name is 'Bifido-cristatum'. The other is a very wide triangular frond, as wide as long, with very evenly crenated pinnules, from a plant of P.australe 'Crenatum' found by Joan Loraine near her home at Porlock and moved into her garden.

In Newsletter No 8, 1970, I mentioned a find by James Merryweather of a small Scolopendrium with rounded fronds which in Henry Schollick's garden was turning into a 'Ramosum'. It has now progressed further and closely resembles 'Gloveri' depicted in Lowe's Our Native Ferns. The stem branches and re-branches and the leafy parts do the same several times but remain flat and overlapping while the plant keeps quite dwarf.

I have a feeling that other varieties were reported to me this year at meetings, but at times when I could not conveniently make notes about them. With me this is fatal, so if anyone reading this article finds that a fern reported to me has not been mentioned, will he - or she - please be patient with me, and let me have the information once more - on paper !

FLORAS IN SCOTLAND - A PERSONAL LIST

by Alison W Rutherford

(see also A guide for local Flora writers by F Perring in Proc Bot Soc British Isles vol 5 part 4, 1964 and Supplement in vol 7 part 1, 1967)

I have been thinking about Martin Rickard's article (Newsletter No 8, 1970) and his remarks on the lack of county Floras in Scotland. It seems Scots did not, and are only just beginning to, consider counties, and tended more towards botanical areas, e.g. the west of Scotland, the Clyde Isles, the central Highlands, and the outer Hebrides. Only two of the 19th century come to mind -

Flora of Perthshire, Francis Buchanan White, 1898. From the brief glance I had at this it seemed to have good pteridophyte lists.

Flora of Dumfries-shire including part of the Stewartry of Kirkcudbrightshire, G F Scott Elliot, 1898. I have had only a glimpse of this - there are some harsh words about Woodsia plunderers !

Two not very common books which I have not seen are -

Flora of Berwick-on-Tweed, G Johnston, in 2 vols, 1829/31.

Natural History of the Eastern Borders, G Johnston, vol 1 Botany, 1853.

The Clyde area in the west of Scotland is probably the best covered one - Arran, a Poem, and Excursions to Arran, David Landsborough, 1847. This is the first in the field if one does not count Balfour's list of 1844 for Ailsa Craig, and has only a short list of the rarer plants of Arran with no localities.

Excursions to Arran, Ailsa Craig, and the Two Cumbraes with reference to the natural history of the Islands, David Landsborough, 1851. This contains probably the first reference to Dryopteris aemula and Hymenophyllum tunbrigense.

Geology of Clydesdale and Arran; embracing also the marine zoology and flora of Arran, James Bryce, 1859. This contains detailed plant lists and localities. The next edition, in 1865, has a note on the discovery of Trichomanes speciosum in Arran. The 4th edition of 1872 is called Geology of Arran and other Clyde Islands with an account of their botany, natural history and antiquities, and is perhaps more easily come across.

Arran: its Topography Natural History and Antiquities, by the Landsboroughs, father and son, 1875. This contains fairly good lists.

On the Fauna and Flora of the West of Scotland. This was done for a British Association meeting in 1876, and has good lists and localities, but King (1891) and those who compiled the 1901 lists had more time.

Wild Flowers in the West of Scotland, John Fleming, 1880. Over this scarce and consequently far from cheap book, I shall draw a veil - it mentions ferns and that is about as far as it goes.

Clydesdale Flora, Roger Hennedy, 5th revised edition by Thomas King, 1891. This is a really useful book, with good descriptions and plenty of localities. Here the first (?) mention is made of Dryopteris cristata and D. villarii, the pteridophyte lists are excellent, and most people think this is the best edition.

Ailsa Craig: its History and Natural History, Rev R Lawson, 1895. This is a second enlarged edition. The ferns, all 7 of them, were listed in 1844 by Professor Balfour of Edinburgh.

Fauna and Flora of the Clyde Area, edited by G F Scott Elliot and others, 1901. Try and get a copy with the folding map and have fun trying to discover where the cryptic alphabetical localities are ! Many people with fairly high IQs have failed dismally, but mercifully, there are actual places listed and plenty of them. This is a good book to have, for as well as long plant lists there are good chapters on geology in some editions, but in others while the index leads you to believe you have only to turn to the end to find them, you will find only about half of them bound in or none at all. This work is the only one I have come across which mentions fern varieties in Scotland.
Flora of the Clyde Area, John R Lee, 1933. This was published by John Smith and Son, Glasgow, to bring the 1901 lists up-to-date and I think copies are still being bound by them as required to meet any demand. It is good for descriptions and habitats but less helpful with localities.
All about Arran, R Angus Downie, 1st edition 1933. The fern list in this is very similar to Bryce's of 1872, and it is a charming book.

The trouble with Scottish botanists, and also horticulturalists, was they lagged behind the rest of the British Isles when pteridomania broke out, probably reaching their peak in the late eighties, and the first World War cured the few who were left in the field, a blow from which our pteridophyte botany has not yet recovered but several people are now working on the subject.

SOUTHPORT FLOWER SHOW

by J W Dyce

Our Stand in the Societies' Tent was well-manned this year. In addition to Bernard Hayhurst, Norman Robinson and myself we had Henry Schollick, while Vivien Wood and Dick Cartwright were able to spend a day with us. At times we were kept well-occupied with enquiries, and it was good to have quite a number of visits from members whom we do not see very often. A good interest in ferns was shown and we recruited a few new members as well as sowing the spores of the cult in the minds of many enquirers.

In the competitive classes for ferns we had some changes this year. Bernard Hayhurst and Norman Robinson have dropped out and we missed Lady Pilkington's usual fine exhibit, but a new exhibitor was Henry Schollick who had real beginner's luck in carrying off several first prizes in spite of having to transport his plants all the way from Oxford. We congratulate him on his success. We had the usual pattern of a few names only ringing the changes for the prizes, and we would like to see more members following the good example of Henry Schollick whose reason for entering was to help fill the gap left by the competitors who had to drop out this year.

In Class 6 for a group of hardy British ferns to be arranged in a natural manner in an area not exceeding 100 square feet, Noel Brookfield was once again the winner of our Society's Silver Trophy with an exhibit of very good ferns which included some of the best of the Lady Ferns, Hartstongues and Polystichums. They were shown to full advantage in a very natural-looking peat and moss bank. W H Howarth got second prize

with an arrangement which was much flatter in appearance, but was, I thought, an improvement on his previous year's entry. There were only two entries in this class.

The prize-winners of the other classes are shown below in order of winning and the other competitors, within brackets -

Class 7 H L Schollick, N Brookfield, R Trippitt. (3 entries)
8 N Brookfield (1), W H Howarth (3). No second. (2 entries)
9 N Brookfield. (W H Howarth, H L Schollick). (3 entries)
10 H L Schollick, N Brookfield, R Trippitt. (3 entries)
11 N Brookfield. (1 entry)
12 H L Schollick, N Brookfield. (2 entries)
13 N Brookfield, R Trippitt, H L Schollick. (3 entries)
14 H L Schollick, N Brookfield, R Trippitt. (3 entries)
15 N Brookfield, R Trippitt. (2 entries)
16 H L Schollick, N Brookfield. (R Trippitt). (3 entries)
17 H L Schollick, N Brookfield, W H Howarth. (3 entries)
18 M Plowman, N Brookfield. (2 entries)

The exhibits included some very fine ferns, and anyone wishing to see a good selection of today's best varieties should visit this Show. There was, however, some fairly bad burning of fronds due to weather conditions and some criticism was addressed to me that this had not been fully taken into consideration in awarding the prizes. Among the Lady Ferns were Athyrium filix-femina 'Clarissima', 'Frizelliae', 'Percristatum', and 'Cruciatum', the last named shown by Robert Trippitt being specially good. There were some excellent plants of Polystichum setiferum 'Plumoso-divisilobum' and 'Divisilobum Iveryanum', and Noel Brookfield had large pans of Polypodium vulgare 'Cambricum Hadwinii' and 'Cornubiense', as well as a magnificent very large pan of Adiantum venustum. Some very good Scolopendriums included 'Crispum Nobile Bolton', 'Crispum Speciosum', 'Ramosum' and 'Ramo-cristatum'. I was particularly interested in an exhibit by Robert Trippitt of one of his own wild finds of Scolopendrium, 'Ramo-cristatum Lupton', which is a very good form. Among the small ferns were Asplenium ceterach, A. ruta-muraria, A. septentrionale and A. viride, also A. trichomanes 'Incisum Moule'.

I append a report by one of the judges -

SOME OBSERVATIONS ON SOUTHPORT SHOW by Reginald Kaye

As in former years W G Mackenzie and I had the honour and pleasure of being invited to judge the Fern Section at Southport Show, and as usual, while in most of the classes the judging presented no problems, in others there was the need for very close pointing to decide on the allocation of prizes. Mr N Brookfield almost automatically takes the first prize for a group of ferns with an artistically set out exhibit of well-grown, distinct and beautiful varieties of British ferns. The runner up was badly staged for a show of this standard.

In the classes for individual genera of three distinct varieties, there would be usually one or two excellent plants and a third rather indifferent specimen. Often excellent specimens were marred by the presence of weathered or broken fronds which should have been removed

when staging. In close competition presentation may make all the difference in the results. Notwithstanding, in one or two cases in close and careful pointing of individual plants, the judges felt it right to award firsts to entries exhibiting such blemishes on account of excellence of the varieties, relative rarity, and otherwise very well-grown plants. In such a show as Southport only the finest specimens, perfectly grown and presented, of irreproachable varieties should be shown; the occasional entry looking as though ripped out of the nearest hedge bottom is not favourably viewed by the judges, and reduces the value of the Show in arousing interest in the public.

We had a problem when Azolla was shown as a hardy fern, and we the judges felt that although regarded as a fern in the true botanical sense it should be disqualified as "not according to schedule". If we are to accept Azolla as a fern in the horticultural context of the Southport Show because it belongs to a sub-class of the Filicopsida, then we should accept Pilularia, Salvinia and Marsilea also, and I personally am of the opinion that such genera should not be included in fern exhibits. One must draw a line somewhere. Perhaps the Show schedule should be amended once more - to homosporous Filicopsida ? This of course excludes Selaginella also.

I think that every encouragement should be offered to gardeners to exhibit their ferns at Southport Show, the only show in the country which invites exhibition of our hardy ferns and their varieties in a special group of classes, a show which practically speaking is the only means of introducing to the gardening public the extent of beautiful plants which can be grown in the shady parts of their gardens. It was very encouraging to see new names amongst the exhibitors, one of which carried off a good proportion of 'firsts', but still we need many more keen amateurs to display their skill in the fern sections. It is sad to see that three of the old stalwarts had dropped out - advancing years and difficulty of transport take their toll. We need new blood in the fern exhibitors, and all should be done to encourage this.

MOVING PLANTS FROM THREATENED HABITATS

In these days of extensive land development, and road making and widening, many wild plants are threatened with extinction and it becomes necessary to consider the moving of colonies of local and rare species to new habitats, in the hope that they will continue to thrive. It is interesting to note that this problem has recently been faced by the Derbyshire Naturalists' Trust when they learned that silica sandpits near Friden, supporting a considerable colony of Lycopodium alpinum, were going to be reworked. To save the plants it was decided to move as many of them as possible to a new site. A nearby one consisting of waste materials from the sandpits, already supporting flourishing colonies of L. clavatum and L. selago, seemed ideal and with the co-operation of the brickworks manager the L. alpinum plants were moved on a day of rain and

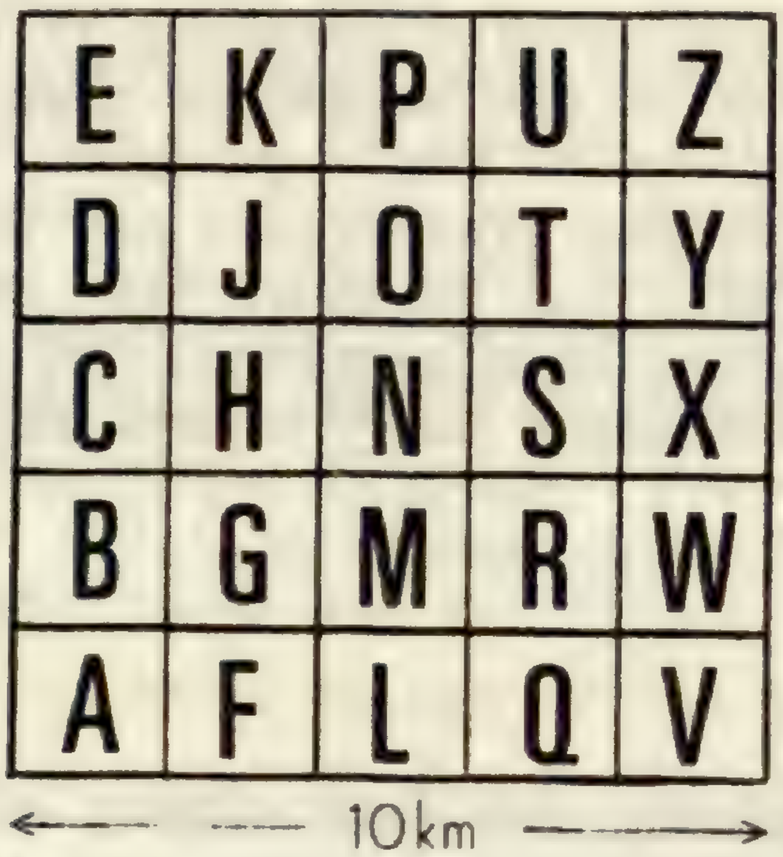
gale-force winds last December to their new abode. We hope the transplant has been a successful one, and we trust that everyone reading this will take heed since we never know when our own local rarities will be similarly threatened by modern development.

DISTRIBUTION OF BRITISH PTERIDOPHYTES

by A C Jermy

In the spring of 1973 it is hoped to publish an Atlas of British pteridophytes. This is a combined project involving the B.P.S., the Botanical Society of the British Isles, the Biological Centre at Monks Wood Experimental Station where all distributional data is kept on punched cards and tape, and the British Museum (Natural History). The new Atlas will be, as the Atlas of the British flora, based on the 10km square. It will be printed on an A4 format (212 x 296 mm) and will thus be more easy to annotate with additional records.

On all our field meetings we record all species seen at each locality visited. This will continue but we shall now record within the tetrad framework which is likely to help present and future vice-county flora compilers. The accompanying diagram shows how the 10km square should be divided and labelled. We shall be pleased to have such records at any time sent to the BPS Recording Officer, C/o The Fern Section, Dept of Botany, British Museum (Natural History), Cromwell Road, London SW7 5BD.



THE CODE OF CONDUCT : A LIST OF RARE PLANTS

by A C Jermy and A J Worland

During 1970, members of the Botanical Society of the British Isles (B.S.B.I.) were circulated with a document entitled A Code of conduct for the conservation of flowering plants and ferns. This Code, which was subsequently in great demand from other bodies and individuals, and is enclosed with this issue of the Newsletter, attempted to present a series of rules which, it was felt, should govern the behaviour of members of the Society with respect to plant conservation, and, in particular, rarities. Under the first heading in the Code, 'Collecting',

the following is stated -
'Members will not pick or collect any material of nationally rare species as defined in a list published by the Society'.
and in a footnote -
'This will be published in an early number of the journal Watsonia and may be subject to amendment from time to time'.
Such a list was published (in Watsonia 9: 67-72; 1972) and the ferns are elaborated below by A J Worland, Recorder of the B.P.S. We recommend all interested in British native plants to study the full list of vascular plants referred to above. The following paragraphs on structure and function of the list are quoted from the Watsonia article mentioned above, with permission -

'In any scheme in which rare and threatened species are enumerated, the problem of regional variation in the frequency of species is of major importance. It is this factor that weighed so heavily when we considered whether the production of separate lists was justified, yet the resolution achieved by the production of just three lists is still clearly inadequate. For instance, Asplenium ceterach does not appear on the England and Wales list, not surprisingly, for it is a very common plant throughout most parts of these countries. Yet, it is a very rare plant in eastern England, and would certainly appear on a list for Cambridgeshire. For this reason, it is hoped that regional or county lists of plants rare in the area with be forthcoming. County Naturalists' Trusts, Local Flora Writers and Regional Committees of the B.S.B.I. might co-operate in the production of such lists. The Biological Records Centre of the Nature Conservancy, at Monks Wood, near Huntingdon, maintains an up-to-date record system on the status of rare plants. Not only is this available to aid the construction of such lists, but it welcomes new information on the status of rarities. Details of the site are kept strictly confidential, but without access to recent reports on the status of rarities it is unable to act as 'watchdog' to advise and to guard against threats to nationally rare species.

'The purpose of the construction of lists of rare species, whether local, regional or national, seems to us twofold. They should warn informed botanists that a species is very rare in a district and in danger of extinction as a result of either particular disturbance (picking, up-rooting or even just visiting in some cases) or environmental disturb-ance (pollution, drainage, building, agriculture, etc.). In addition, published lists of rare plants should provide invaluable assistance to the conservationist: accurate information on the scarcity of a plant species is more likely to carry weight with land-owners, planning authorities, courts of enquiry etc, than a spoken opinion.

'Lists of this kind can never be wholly satisfactory. Some excluded species may well be more threatened than some which are included, and doubtless some of those that are included might be omitted. Suggestions for improvements to the list will always be welcome and, if they are accepted by the B.S.B.I. Conservation Committee, can be included in subsequent editions.' (Such suggestions should be sent to A J Worland)

List of rare fern species not to be collected or picked

A. England, Wales, Channel Islands and Man

Lycopodium selago (in lowland England only)
L. inundatum
L. annotinum
L. alpinum (in lowland England only)
Isoetes histrix
Equisetum pratense
Osmunda regalis
Hymenophyllum tunbrigense (except in SW peninsula)
Trichomanes speciosum
Cryptogramma crispa (in SW England and S Wales only)
Anogramma leptophylla
Adiantum capillus-veneris (except where introduced)
Asplenium billotii (N England only)
A. septentrionale
Woodsia ilvensis
W. alpina
Dryopteris villarii (Wales only)
D. cristata
D. assimilis
Polystichum lonchitis
Phegopteris connectilis (SE England only)
Gymnocarpium dryopteris (S and E England only)
Ophioglossum lusitanicum

B. Scotland

Trichomanes speciosum
Asplenium billotii
A. septentrionale
Cystopteris dickieana
Woodsia ilvensis
W. alpina
Dryopteris cristata
Thelypteris palustris
Gymnocarpium robertianum
Polystichum setiferum
Polypodium australe

C. Ireland

Trichomanes speciosum
Cryptogramma crispa
Asplenium billotii
Asplenium septentrionale
Gymnocarpium dryopteris

BOOK REVIEW . by A J Worland

WATSONIAN VICE-COUNTIES OF GREAT BRITAIN, by J E Dandy, 38 pages plus 2 maps, The Ray Society, London, 1969, Obtainable from Johnson Reprint Co, Berkeley Square House, Berkeley Square, London. Price £1.00 (with flat maps and booklet), £1.50 (with folded maps, booklet and slipcase).

Hewett Cottrell Watson (1804-81) was an amateur botanist whose interest lay in studying and recording the distribution of vascular plants. In a series of publications in the 19th century he formulated his ideas for dividing Britain into a number of similarly-sized units for recording purposes. Watson reasoned that for these recording units to be acceptable they would need to be based on the well-documented, administrative county boundaries. The counties were however of "extreme inequality in size" and "most inconvenient and objectionable", with the area of the largest about one hundred times the size of the smallest. His idea was to divide large counties into a number of smaller "vice-counties", and to merge the smallest with larger neighbours to form single units. By

this method he divided the country into 112 similarly-sized vice-counties, numbered consecutively from 1 (West Cornwall) in the south, to 112 (Zetland) in the extreme north. The idea of dividing the country into vice-county regions for botanical recording purposes has proved very popular now for over a century and a wealth of data has accumulated under this scheme.

Alternative schemes would be either to divide the country up on a basis of grid squares - but the disadvantage here would be that whereas the v.c. boundaries tend to follow easily discernable features in the field, those of grid squares would not - or to use the present county boundaries which however, are subject to continuous revision. It would seem sensible to retain the Watsonian v.c. scheme as a standard but, up to the publication by the Ray Society of their Watsonian Vice-counties of Great Britain, no reasonably sized maps marking the boundaries have been available. The publication consists of two monochrome Ordnance Survey maps on a scale of about 10 miles to one inch covering the whole country. Superimposed in red are the Watsonian vice-county boundaries and numbers. An informative booklet explaining the scheme and detailing the boundary lines accompanies the maps.

This publication will be essential for anyone interested in botanical recording which can be now categorically related to the appropriate v.c. The standard unit is now clarified and can be adhered to, hopefully breaking the tradition of recent years when publications such as Newton's Flora of Cheshire and Clapham's Flora of Derbyshire, have accepted the county boundary at the time of data collection as their unit but have failed to relate it to the original v.c. boundary, or to publish clear maps showing its position in case of further change.

FERN GARDENS

Last year we commenced publication in the Newsletter of the names of public and private gardens containing ferns, which members could visit. I hope this has proved to be a helpful information service. The list will be published annually, with additions or deletions, and some names have been added this year. Suggestions and information on other gardens to include are welcomed.

I have to repeat what I wrote last year that intending visitors to private gardens must note carefully the owners' requests to make prior arrangements by letter or telephone. I would emphasise, too, that the inclusion of any garden open to the public does not necessarily imply that admittance can be gained at any time a member calls. Lack of space precludes the inclusion of details here and intending visitors must make their own enquiries. It must be understood that I have no personal knowledge of many of these gardens, in which the fern content may be negligible.

Botanic Gardens and Gardens open to the public

Botanic Garden, University of North Wales, Bangor, Caernarvonshire
Botanic Garden, Glasgow

Royal Botanic Gardens, Edinburgh
Royal Botanic Gardens, Kew, Surrey
University Botanic Garden, Cambridge
University Botanic Garden, Hull
University Botanic Garden, Leicester
University Botanic Garden, Oxford

Bellahouston Park, Glasgow
Branklyn Gardens, Perth
Harlow Car Gardens, (Northern Horticultural Society), Harrogate, Yorks
Inverewe Gardens, Poolewe, Achnasheen, Ross-shire
Savill Garden, Windsor Great Park, Berks
Sizergh Castle Gardens, Near Kendal, Westmorland
Wakehurst Place Gardens, Ardingly, Haywards Heath, Surrey
Wisley Gardens, (Royal Horticultural Society), Ripley, Surrey

Gardens to visit, an annual booklet published by the Gardeners' Sunday Organisation, lists gardens opened to the public in aid of the Gardeners' Royal Benevolent Society and the Royal Gardeners' Orphan Fund, which may be visited during the year from March to October. The 1973 edition can be obtained through W H Smith's or Wyman's bookstalls for 10p, or direct from the Organiser, Mrs K Collett, White Witches, Claygate Road, Dorking, Surrey for 13p post free.

Private Gardens BY PRIOR ARRANGEMENT

Miss Askew, Grange, Borrowdale, Keswick, Cumberland. LETTER OR PHONE
N Brookfield, 102 Stamford Road, Birkdale, Southport, Lancs
LETTER OR PHONE - WEEKENDS PREFERRED
Mrs K M Catlin, The Beeches, Standon, Nr Stafford. LETTER OR PHONE
C H Fisher, Drabbington, Thornbury, Bromyard, Hereford. LETTER ONLY
C R Fraser-Jenkins,Newcastle House, Bridgend, Glamorgan. LETTER ONLY
B Hayhurst, 91 Windermere Road, Freehold, Lancaster. LETTER OR PHONE
Mr and Mrs F J Healey, Ferry Road, South Stoke, Reading, Berks. PHONE
F Jackson, Knotts View, Stonethwaite, Borrowdale, Keswick, Cumberland.
LETTER
Miss J Loraine, Greencombe, Porlock, Somerset. LETTER OR PHONE
J Lord, Townhead, Austwick, Via Lancaster. LETTER
H L Schollick, 96 Church Way, Iffley, Oxford. LETTER OR PHONE
Mrs S B Spencer, York Gate, Back Church Lane, Adel, Leeds LS16 8DW.
LETTER OR PHONE
Mrs M R Stuart, Millglen, Baledmund Road, Moulin, Pitlochry, Perth.
LETTER OR PHONE
Dr H S Wacher, 77 St Stephens Road, Canterbury, Kent. LETTER OR PHONE

Nursery

Reginald Kaye, Waithman Nurseries, Silverdale, Carnforth, Lancs.
DURING BUSINESS HOURS

Flower Show

Southport Flower Show. Held in August annually. (1973 - 23-25 Aug)

SPORE AND PLANT EXCHANGE

Organiser - David Russell, 20 York Avenue, Stanmore, Middlesex.

This new service, inaugurated last year, has got off to a good start in the hands of David Russell who has given a lot of time and energy towards making it a success. We had a modest list last year, but David has been very busy soliciting spores from many places overseas as well as at home, and he can offer a much better selection this year. If, however, the spores you want are not included, write to him and he may be able to get them or suggest where they may be available. He will also welcome your suggestions for improving the Exchange.

I would remind you that the Exchange can only function if it has spores to exchange, so please make a point of sending spores from your good plants which you think others would like to have, as well as collecting them from wild species, but PLEASE DO NOT strip rare ferns of their fronds for this purpose - a few pinnae from one or two fertile fronds will provide all that is required and the plant will suffer no damage.

The American Fern Society also runs a Spore Exchange, and lists can be obtained from the organiser, Neill D Hall, 1225 NE 95th Street, Seattle 15, Washington, USA. This list contains many ferns we do not have, and if you avail yourself of the opportunity to obtain spores from this source, please do not forget that the Exchange works both ways, and Neill will be glad to have from you spores of our ferns, varieties as well as species.

The University of Hull Botanic Garden issues a list of seeds and spores offered for exchange; this can be obtained from the Assistant Curator, Botanic Garden, Department of Botany, The University, Hull HU6 7RX.

Some members like to make direct contacts in other countries for exchange purposes, and we shall gladly add your name to the list if you will let the Secretary know. All correspondence must be between the interested parties, and not via the Secretary.
The following overseas members are interested in the exchange of spores -

Mrs E S Bayley, Danbury Park, Postbox 21 MR, Marlborough, Salisbury, Rhodesia.

G R Halliwell, 9 The Avenue, Bellambi 2518, South Coast, New South Wales, Australia.

Jaroslav Krecmer, nam J Krautwurma 14, Plzen, Czechoslovakia.

G Kunkel, Camino Viejo 9, Tafira Alta, Las Palmas de Gran Canaria, Canary Islands.

Mrs Sylvia Leatherman, of the Los Angeles International Fern Society, 2637 North Lee Avenue, South el Monte, California 91733, USA.

F H Low-Choy, 42 Lang Parade, Auchenflower, Brisbane, Australia 4066.

Mrs Nancy M Sherlock, 590E Kings Road, North Vancouver, B C,Canada.

Miss K H Stocker, Mapua, via Nelson, New Zealand.

Professor T M C Taylor, Millstream Road, R R 6, Victoria, B C, Canada would like to exchange herbarium specimens; he wants any European species and can offer North American and Hawaiian species in exchange.

WORLD FERN SOCIETIES

For the information of members who are interested in the ferns of other countries, we give a list of fern societies known to us. If others exist, the Secretary will be glad to have information about them.

AMERICAN FERN SOCIETY Correspondence c/o Smithsonian Institution, Washington, D C, USA.

LOS ANGELES INTERNATIONAL FERN SOCIETY Wilbur W Olson, Membership Chairman, 2423 Burritt Avenue, Redondo Beach, California ~~90250~~ 90278, USA.

JAPANESE PTERIDOLOGICAL SOCIETY Correspondence c/o Dr K Iwatsuki, Dept of Botany, Faculty of Science, Kyoto University Kyoto, Japan.

THE NIPPON FERNIST CLUB Correspondence c/o Professor Satoru Kurata, Dept of Forest Botany, Faculty of Agriculture, Tokyo University, Hongo, Bunkyo-ku, Tokyo, Japan 113.

NELSON NEW ZEALAND FERN SOCIETY Correspondence c/o Miss K H Stocker, Mapua, via Nelson, New Zealand.

FERN BOOKS

I am sorry I had to disappoint many members who wrote asking for the books I mentioned in the Newsletter last year. They were very quickly disposed of, but books are coming my way all the time and if anyone has a particular want, please let me know and when the next copy comes in, I can offer it quoting the price which, of course, may or may not be acceptable - prices can vary a lot in the secondhand book market but I am afraid that bargains are not so easily come by these days! Titles I have in hand are some of Moore's smaller books - Popular History of British Ferns at £2.00, British Ferns and their Allies £1.25 to £1.50, and British Ferns and Mosses at 50p, and Heath's The Fern World varying from £1.50 to £3.50, also The Fern Paradise at £2.00. A very nice copy of Pratt's Grasses and Ferns of Great Britain is offered at £4.00 and her Ferns of Great Britain at £2.00, and Newman's History of British Ferns, 1854 edition at £1.75, also a very good copy at £2.50. I have been lucky in picking up a few copies of Druery's British Ferns and their Varieties, but this is getting very expensive - the ninety six reproductions of the Jones Nature Prints at the end no doubt accounts for this. The price is £4.50 and I have one copy left. A small book which is rising in price fast is Ferns of the Axe by Edwards. The price I am asking, £2.00, is a lot but I bought this copy for the simple reason that I don't expect to pick it up for less, and it is a most useful little book for the fern hunter in the West Country.

For the information of newer members we have a large supply of David Allen's Victorian Fern Craze which we sell at 40p or post free 50p, and we can also offer our own publication A Beginner's Guide to Fern Study by Margaret Merryweather at 25p or post free 30p. This is a second expanded edition, aimed at a wider range of beginners, of the booklet

reviewed in the 1971 Newsletter under the title of A Student's Guide to a Selection of Fern Literature and Suggestions for Study. We also hold stocks of the back issues of the British Fern Gazette from Volume 1 onwards - the early volumes up to Volume 8 deal chiefly with fern hunting and the description and cultivation of the many varieties of British ferns, written very largely by the two outstanding authorities in this field, C T Druery and Dr F W Stansfield. They are a veritable encyclopaedia of fern knowledge for the variety collector and are available either in complete sets or as separate issues, from the Secretary. Back numbers of the Newsletter are also available from No 5 onwards.

I would repeat here my request on Page 2 for the presentation or sale to us of old fern books and any early copies of the Gazette not required.

NEW MEMBERS AND SUBSCRIBERS

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WOOD Dr C C, BSc, PhD, Department of Botany, The University, P O Box 147, Liverpool L69 3BX

OBITUARIES

Thomas Henry Bolton

It is with very much regret that we have to announce the death on 21 July 1972 of Tom Bolton, a Vice-President and past President, and an Honorary Member of the Society. He had not been in good health for some years and had, perforce, to become less active in our affairs - since our earliest days in 1891 the Boltons have always been well to the fore in Society activities, and those of us who knew Tom miss him greatly.

Tom Bolton was born on 24 August 1899 in Warton, Carnforth, Lancashire - an area renowned in our early literature, and into a family equally renowned. He must have been steeped in ferns from his earliest days and his love of them never left him. His collection inherited from his father, was one of the best still existing in the country, and he was extremely generous in gifting plants from it to members who visited him. I have still vivid memories of the day in 1961 when 16 members of the Society descended on Birdbrook and after a magnificent lunch given by him in a Haverhill hotel, returned to his garden where he had garden forks and plastic bags all ready and we were let loose among the ferns ! His only stipulation was that where stocks of a particular variety were low we should not take too many of them. A large number of plants left Birdbrook that day but very little impression was made on the collection. I am glad to add that it is still intact in the hands of his son, Robert, who has joined us to continue the Bolton tradition, a tradition which commenced with three members of the family joining the Society in its early years, one of them, Thomas Bolton, being a founder Vice-President. It continued with Robert Bolton, Tom's father, who was President from 1948 till his death in 1949 and a recipient of the Society's Stansfield Memorial Medal; later, Tom was also our President, from 1958 to 1960.

Ferns are a hobby with the Boltons, but the family has achieved world fame in the horticultural world as breeders and growers of sweetpeas at Birdbrook in Essex where they already had a nursery when Tom moved there with his parents in 1917. The firm of Robert Bolton was founded about 1900 and Tom became a partner in 1922. He took over the firm after his father's death and his fame as a grower of sweetpeas grew. Many of today's outstanding varieties have been bred by him, including 'Mrs C Kay','Princess Elizabeth', and 'Mabel Gower' which won the Carters' Challenge Cup for the best blue and has not yet been bettered. He won the National Sweet Pea Society Henry Eckford Memorial Medal in 1952, and the Scottish National Sweet Pea Society and Rose Society Medal for Meritorious Service in 1965. I can remember, too, the wonderful sweetpea exhibits he showed at Chelsea Flower Show in years past, several of which won gold medals.

Tom is survived by his wife and son Robert, and to them we extend our deepest sympathy in their great loss. Robert has taken over the firm and we wish him continued success in the sweetpea world, and we hope too, that the Bolton interest in ferns will continue undiminished and linked as strongly as ever to our Society.

J W Dyce

Conrad Vernon Morton

Conrad Morton a senior botanist at the Smithsonian Institution's National Museum of Natural History in Washington, DC, USA, died on 29 July 1972, at the age of 66. He was born in Fresno, California, on 14 October 1905, and received a bachelor's degree with honours in 1928 from the University of California at Berkeley. Shortly after graduation, he joined the Smithsonian staff as a temporary aide in the Division of Plants. His unusually retentive memory and scientific abilities were quickly recognised, and soon he was made a permanent member of the staff. He was an assistant curator and later an associate curator during the period of 1938 to 1948, when he became Curator of the Division of Ferns, the position he held at the time of his death.

During the 44 years he studied and added to the Smithsonian collections, he became an internationally known authority on Pteridophyta, Solanaceae, and Gesneriaceae, as well as on botanical nomenclature. He was an honorary member of both the American Fern Society and the American Gloxinia and Gesneriad Society. He made collecting trips to Mexico, Honduras, St Vincent, Cuba, and Argentina, and studied extensively in the museums of Great Britain and Europe. He published more than 250 papers, almost all of them taxonomic, and countless reviews.

Mr Morton was an associate editor of the American Fern Journal from 1940 to 1947. He served as editor-in-chief from 1948 to 1961 and was currently an associate editor. He was a Guggenheim Fellow in 1954, and was a member of Phi Beta Kappa, Sigma Xi, and Phi Sigma professional fraternities.

Besides his professional interests, Mr Morton was an accomplished pianist and painter. He was active in the Washington Arts Club drama and painting sections and served as its Corresponding Secretary. His other interests included horticulture, philately, drama and stagecraft, and the history of the cinema.

A biography and bibliography of Mr Morton will be published in the June 1973 issue of the American Fern Journal.

David B Lellinger,
Smithsonian Institution, Washington.

FERN NURSERIES

Not many nurseries seem to stock ferns and I get frequent enquiries from members and others wishing to know where they can be purchased. I cannot confirm that all the nurseries listed below still keep ferns, but the names were given to me and I include them. Additions and amendments to the list will be welcomed. Some of these mentioned keep good stocks and among them is the fern specialist nursery of Reginald Kaye who keeps comprehensive stocks of most of the good ferns and varieties available.

NOEL BROOKFIELD	102 Stamford Road, Birkdale, Southport, Lancashire	HARDY
THOMAS BUTCHER	Wickham Road Nursery, Shirley, Near Croydon, Surrey	MAIDENHAIR
HIGHFIELDS NURSERY	Caldecote, Cambridge	HARDY
HIGHLANDS WATER GARDENS	Rickmansworth, Herts	HARDY
HILLIER AND SONS	Winchester, Hants	HARDY
W E TH INGWERSEN LTD	Birch Farm Nursery, Gravetye, East Grinstead, Sussex	ALPINE
REGINALD KAYE LTD	Waithman Nurseries, Silverdale, Carnforth, Lancs	HARDY
LOCHHALL NURSERY	21/23 Kirk Street, Stonehouse, Larkhall, Lanarkshire	HARDY
NEWLAKE GARDENS	New Chapel Rd, Crawley. Sussex	HARDY
NORGAARDS STAUDER	Hovedvej 10, Lilballe, 6030 Bramdrupdam, Denmark	HARDY
PERRYS HARDY PLANT FARM	Theobalds Park Road, Crews Hill, Enfield, Middlesex	HARDY
PROUDLEY'S HEATHER NURSERY	Two Bridges, Blakeney, Glos	HARDY
SUNNINGDALE NURSERIES	Windlesham, Surrey	HARDY

THE BRITISH PTERIDOLOGICAL SOCIETY

MEETINGS PROGRAMME FOR 1973

MEETINGS SECRETARY - A J Worland, 102 Queen's Close, Harston, Cambs

MEETINGS COMMITTEE - R F Cartwright, J W Dyce, M H Rickard

The 1973 Meetings Programme has been arranged along similar lines to the popular programme of 1972 but in particular, this year we are trying to improve the planning of the indoor meetings. If members have any suggestions for field meetings or improvements to indoor meetings, we shall be very pleased to receive them.

Please note that members attending field meetings are requested to observe strictly the Society's rules for the conservation of rare plants and to respect the leader's ruling when taken to sites of special interest. In this connection we draw attention to the article on Page 32 of this issue of the Newsletter, and recommend that it be studied closely.

MEETINGS

Saturday 10 February — Indoor Meeting in the Conversazione Room at the British Museum (Natural History), Cromwell Road, London S W 7.

- 3 00 pm Exhibits and Conversazione
- 3 30 pm Talk on "Equisetums" by Dr Chris Page
- 4 30 pm Buffet Meal
- 5 15 pm Members slides - theme "Alpine Pteridophytes"

Saturday 19 May — Visit to the Fern Houses at Kew Botanic Gardens, with demonstration on fern culture from spores by John Woodhams.
Meet at 2 30 pm outside the Fern Houses.

Friday/Sunday 1/3 June — Weekend Meeting in the New Forest.
Leader - Jimmy Dyce
Centre - Evergreens Hotel, Romsey Road, Lyndhurst.
Tel: Lyndhurst 2175
EARLY BOOKING before the end of 1972 is essential to make sure of accommodation.
B and B - Mrs M Hester, White Moor House, Southampton Road, Lyndhurst, Tel: Lyndhurst 2186.
Camping - On New Forest sites.

Friday/Sunday 15/17 June — Weekend Meeting in Yorkshire.
Leaders - James and Margaret Merryweather
Centre - Blue Bell Hotel, Kettlewell. Tel: Kettlewell 230
B and B - Fox and Hounds Inn, Starbotton.
Camping - Apply to Leaders, 176 Cromwell Road, Cambridge.

Friday/Sunday
29 June/1 July

Weekend Meeting in Borrowdale, in the Lake District.
Leader - Fred Jackson
Centre - Scafell Hotel, Rosthwaite, Borrowdale, Keswick, Cumberland. Tel: Borrowdale 208.
B and B - Mrs A Jackson, Knotts View, Stonethwaite, Borrowdale, Keswick.
Camping - Apply to Leader, Knotts View, Stonethwaite, Borrowdale, Keswick.
PLEASE BOOK EARLY

Saturday
14 July

Visit to Savill Garden, Windsor Great Park, Berks.
Leader - Jack Healey
Meet at 11 am in the car park inside the Englefield Green entrance to the Garden.
Bring packed lunch or use lunch facilities in Garden.

Saturday/
Saturday
21/28 July

Killin, Perthshire.
Leader - Jimmy Dyce
Centre - Morenish Lodge Hotel, Loch Tayside, Killin. Tel: Killin 258.
B and B - Mrs E L Crosbie, 7 Lyon Villas, Killin. Tel: Killin 368.
Camping - Apply to Meetings Secretary.

Sunday
12 August

Day Trip to Essex/Suffolk.
Leader - Vivien Green
Meet at Honeysuckle Cottage, Halstead Road, Aldham, Colchester, Essex, by 11 30 am. Honeysuckle Cottage is on A604, east of Aldham Village, and members are invited to arrive early (after 10 30 am) to look at the garden and have coffee before the Meeting starts.

Friday/Sunday
17/19 August

Weekend Meeting in Wye Valley.
Leaders - James and Margaret Merryweather
Centre - Wye Rapids Hotel, Symonds Yat West, Ross-on-Wye, Hereford. Tel: Symonds Yat 366.
B and B - Saracens Head Inn, Symonds Yat East.
Camping - Apply to Leaders, 176 Cromwell Road, Cambridge.

Thursday/
Saturday
23/25 August

Southport Flower Show.
Many fern classes, showing a fine selection of the best varieties. The Society has a Stand in the Societies' Tent.
Come and visit us when at the Show.

Saturday/ Saturday
8/15 September

Snowdonia, North Wales.
Leader - Jimmy Dyce
Centre - Bryn Eglwys Hotel, Railbridge, Beddgelert, Caernarvonshire. Tel: Beddgelert 210.
B and B - Mrs Ll K Wynne-Roberts, Ffridd-Uchaf Farm, Rhyd-Ddu, Beddgelert. Tel: Beddgelert 253.
Camping - Snowdonia Forest Camp Site. Tel: Bedd. 288. 1 mile from Beddgelert on A487 to Caernarvon. Apply to - Forestry Commission, North Wales Conservancy, Victoria House, Victoria Terrace, Aberystwyth, Cardigan.

Friday/Sunday
28/30 September

Weekend Meeting at Porlock, Somerset.
Leaders - Tony Worland and Joan Loraine
Centre - Ship Inn, Porlock Weir. Tel: Porlock 325.
NOTE - not the Ship Inn in Porlock
B and B - Mr and Mrs J Starkey, Oaklands Guest House, Porlock, Tel: Porlock 395.
Camping - Porlock Park. Tel: Porlock 269. Off B3225 Porlock Weir road.

Saturday
6 October

Indoor Meeting at Capel Manor Horticultural Centre, Bullsmoor Lane, Waltham Cross, Herts, where the Society is establishing a collection of hardy fern species and varieties.

2 00 pm	Visit to see progress in planting of the Fern Collection, led by David Russell.
3 00 pm	Cup of tea, exhibits and conversazione in lecture room.
3 30 pm	Annual General Meeting of the Society
4 30 pm	Talk on "Fern Varieties" by Jimmy Dyce
5 30 pm	Buffet meal
6 00 pm to 7 00 pm	Members slides of the year's field meetings

Saturday
6 October

Annual General Meeting to be held at Capel Manor Horticultural Centre, Bullsmoor Lane, Waltham Cross, Herts, at 3 30 pm.

DETAILED DIRECTIONS AND SKETCH MAP will be sent with the AGM Notices to help members find the venue for these Meetings on 6 October.

WILL ALL MEMBERS ATTENDING ANY OF THE FIELD MEETINGS PLEASE READ THE FOLLOWING NOTES, ALSO THOSE ON THE MEETINGS FORM.

NOTE 1 With the exception of the Annual General Meeting, further necessary information regarding the meetings will be advised only to members who complete and return the Meetings Form (attached) to the Meetings Secretary.

NOTE 2 Members must make their own accommodation arrangements. If any help additional to the information supplied above is required, please apply to the Meetings Secretary.

NOTE 3 Weekend meetings commence on the Friday evening to allow an early start to be made on the following morning. Members unable to arrive on the Friday evening, and wishing to join the Saturday and/or Sunday meetings, should advise the Meetings Secretary or the Leader beforehand, and should be at the meeting place before 9 30 am. While every endeavour will be made to do so, we cannot guarantee to leave sufficiently explicit directions to enable late-comers to follow on and make contact.

NOTE 4 Private car transport will be used. Please mark the Meetings Form accordingly.

NOTE 5 EARLY BOOKING OF ACCOMMODATION IS ADVISED FOR MID-SEASON MEETINGS.

FERN HOLIDAY ACCOMMODATION

Mrs A Jackson, Knotts View, Stonethwaite, Borrowdale, Keswick, Cumberland, a guest-house in a most beautiful part of the Lake District, and the home of our member, Fred Jackson; a special welcome will be given to members of the Society. The accommodation is limited and as the area is extremely popular with holiday makers early application should be made.

Mrs E M Borup, 30 Earls Court Square, London S W 5, has a small house at Sticklepath (Belstone), South Zeal, Devon, 18 miles west of Exeter and 3 miles from Okehampton. She lives there from time to time, but there are periods when members could use it, to be self-catering and taking own linen; it has 4 beds (2 bedrooms), bathroom and electricity. It is situated on high ground above the village, with buses close by, plenty of level car parking space, and adjacent to some of the finest parts of Dartmoor. The rent is £12.50 per week and fuller information can be obtained from Mrs Borup.

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